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ABSTRACT

This lengthy document describes a Career Achievement Skills Training (CAST) program, implemented in Pontiac, Michigan, a highly industrialized city of 120,000 located approximately 30 miles from Detroit. The purpose of the program was to deliver career achievement skills to selected K-12 students. Through the skill processes presented in the CAST program the students develop skills needed to learn about and plan for their careers. An inservice training program was first held for teachers and counselors so that they would understand the program. Then these teachers, using a lesson plan manual developed by CAST participants, delivered the program to their students once per week over the course of the year. This particular manuscript describes the program in detail and includes a section on major findings and on program evaluation. (Author/HMV)

Abstract

The focus of the CAST project was to deliver career achievement skills to selected K-12 students. In the expanding phase the students learn how to expand information about themselves and the job by using people and thing sources. The narrowing phase helps the students relate the career information to their values using a decision-making process. Finally, in the preparing stage, the students conduct an interview/internship with a person working in the job they have chosen, re-evaluate their job decision in light of the information gained and develop a program to bring them closer to their career goal. A recycling through the process may help students further expand career information or it may help them expand information in other areas of their life. The process must be used to be maintained.

Through the skill process presented in the CAST program the students learn the skills of how to learn about and plan for their careers. These skills will help students increase their career and life choices. CAST students do not have to rely on chance to dictate their fates, they have skills to maximize their successes.

The program was implemented in Pontiac, Michigan, a highly industrialized city of 120,000 located in Oakland County approximately 30 miles north of Detroit. The school district includes 120,000 people as compared with almost 700,000 people in Oakland County and 7,800,000 in the State of Michigan. Of the 120,000 people, 25% are Black and 4.4% are Latino. The percentage of Black exceeds the percentage of both the state and county level.

Most of the residents of Pontiac are employed with one of the three major General Motor Divisions located within the city limits. However, Pontiac, being the industrial center that it is, does not provide adequate employment and/or income for all its residents.

Approximately 450 students distributed, as shown in the chart below, were involved in Phase III of the CAST program.

Grade Level	Total # of Students Receiving CAST
1	60
7	210
8	150
9	90
12	30
	440

These students represented a cross section of the Pontiac Schools which have a racial balance of approximately 60% White, 30% Black and 10% Latino.

In order to insure that CAST participants could develop, deliver, and disseminate the CAST program, training was necessary. This Phase III training was conducted for selected teachers and counselors and was lead by Dr. Ted Friel and Dr. David Berenson from Carkhuff Associates. They were assisted by eight Pontiac trainers who had been involved in the CAST program the previous year and were serving as trainer interns.

The training was based on the Carkhuff Human Resource Development Model. (Carkhuff, Berenson, Pierce 1974) and included human, educational and career skills. The skills were presented using the Working Skills and Life Skills Series (Carkhuff 1974) and the Phase II Lesson Plan Manual developed by CAST participants.

Using the above lesson plan manual, the teachers and counselors delivered the program and revised the lesson plan manual according to their students' needs. The revisions were reviewed and a Phase III Lesson Plan Manual developed. While the Phase II manual was more appropriate for delivery of CAST to students, the Phase III manual was more suited for training teachers and counselors to deliver to CAST skills.

The teachers and counselors delivered CAST once per week over the course of the year.

During this time the trainers provided followup observations in the classroom, provided programs for skill improvement and conducted evening training sessions. In addition, the trainers helped organize internship for each student in the CAST program.

Before going out on their internship several classes piloted a computerized job exploration system called CAOS (Computer Assisted Occupational Search) which was modified by the Pontiac Research and Evaluation Department and on Dr. John Holland's "Self Directed Search". The purpose of this search was to provide students with another way of expanding jobs before deciding on their internships.

The following is a summary of the instruments used to evaluate the components of the Phase III.

The students were post tested using an open ended summary question which asked them to develop a career plan. Results: CAST students significantly outperformed non CAST students.

Teachers and counselors were evaluated before and after training using human, education and career inventories developed by Carkhuff Associates. Results: Teachers and counselors increased significantly in the human and education skills.

Teachers and counselors responded to a questionaire addressing all components of CAST.

CAOS was piloted with several classes and compared to a non computerized version.

The results of the evaluation are as follows:

Students

Elementary students can learn the career achievement skills.

CAST junior high students significantly outperformed non CAST students in developing a career plan.

High school students trained in the CAST skills and human skills stand a 90% greater chance of being hired for a job than non CAST students.

Training

Teachers and counselors trained by CAST trainers did show significant gains in the human and educational skills from pre test to post test.

Curriculum Development and Delivery

Over 75% of the teachers felt that the curriculum was better than the traditional materials in terms of student learning.

Approximately 77% of the teachers felt that the best way to deliver CAST was using the lesson plan manual and the comic book - The Story of Who (Carkhuff 1974) together.

CAOS

Students using CAOS can complete the instrument in one-fourth the time that students using the non computerized version of Dr. John Holland's "Self-Directed Search".

CAST was an outstanding project which can serve as a model career education delivery system for other school districts so that their students can be equipped with the skills to exercise their freedom to live, learn and work effectively.

ACKNOWLEDGEMENTS

To Dr. Ted Friel, Dr. David Berenson and Dr. Richard Pierce who taught us and showed us by example, what it takes to live and work effectively and to devleop a program which can be delivered to students.

To the Pontiac CAST Trainers:

Jim Ahearn
Mike Burklow
Karen Danley
Kaye Jeter
Dave Landers
Linda Phillips
Bob Rochow
Deane Safir
Ginny Yansen

who reached beyond themselves so that they could help others grow and live more effectively.

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Eleanor Byrnes
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My thanks to all of you for giving of yourselves to making CAST the success it was for Pontiac students and for making it a truly outstanding model for other school districts so that their students, as ours, will be equipped with the skills they need to increase their freedom to live, learn and work effectively.

Judy Battenschlag
Project Director

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PROGRAM DESCRIPTION

This first major section includes the following subsections:

A. Background Information - This is included to provide the reader with pertinent data regarding the community and school district in which the Human and Computer Assisted Career Achievement Skills Program was developed as well as the factors which influenced and the rationale behind its development.

B. Phase I and II Program Description - This will provide the reader with a brief overview of the program up until the beginning of Phase III. An understanding of the first and second phases will assist the reader in seeing the Phase III report in its relation to the first two phases of the project.

C. Phase III Introduction - In this subsection the goals of Phase III will be discussed.

D. Phase III Components - In this subsection the people, programs (training, curriculum, internship, and computer) and organization in Phase III of the Human and Computer Assisted Guidance Program will be described.

Background Information

Locale

Population - City

Pontiac, Michigan is a highly industrialized city of 120,000 located in Oakland County approximately 30 miles north of Detroit. The school district includes 120,000 people as compared with almost 700,000 people in Oakland County and 7,800,000 in the State of Michigan. Of the 120,000 people, 25% are black and 4.4% are Latino. The percentage of Black exceeds the percentage of both the state and county level.[1]

Employment

Most of the residents of Pontiac are employed with one of the three major General Motor Divisions located within the city limits. However, Pontiac, being the industrial center that it is, does not provide adequate employment and/or income for all its residents. A look at the number and amount of ESEA Title I and OEO programs shows that the percentage of economically deprived persons in Pontiac exceeds the state and county level.

The following 1970 census information illustrates that the general composition of urban centers across the nation is in evidence in Pontiac.

a. Annual mean income - $9,680.00

b. Annual income by % of families and individuals

Less than $1000	2.55%
$1000 - $1999	2.72
$2000 - $2999	4.03
$3000 - $3999	4.16

c. Comparative Data for 15 Michigan Metropolitan Core Cities ranks Pontiac first in unemployment and at 10% under the poverty level.

ADC cases in Oakland County Communities:

	ADC Cases		ADC Children	
	No.	% Co. Total	No.	% Co. Total
Oakland County	8,497	100.00	20,811	100.00
Pontiac	3,869	45.53	9,285	44.61

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[1] All statistics presented are 1970 census figures.

School District

When the Human and Computer Assisted Guidance Program began in 1970, the enrollments for the Pontiac Schools were as follows:

Grade	Total Student Enrollment	Total White	White Percent	Total Black	Black Percent	Total S.A.*	S.A. Percent
K-6	14,295	8,986	65.6	4,641	32.5	668	4.7
7-9	5,295	3,330	62.9	1,738	32.8	227	4.3
10-12	4,217	2,661	63.1	1,400	33.2	156	3.7
TOTAL	23,977	14,977	62.9	7,779	32.7	1,051	4.4

Level	Number of Schools	Number of Classroom Teachers	Number of Counselors	Number of Pupils
K-6	29	459	2	14,295
7-12	8	375	29	9,512
TOTAL	37	834	31	23,807

With the beginning of busing the school organization changed. Half of the elementary schools became K-3 and the other half K, 4-6. Two Junior Highs became 7th, two 8th and two 9th grade schools. In this organization one early elementary, one upper elementary and one junior high became a cluster. The school district has continued to operate under this integration plan.

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*Spanish-American

Special Factors

Many factors locally, nationally and at the state level laid the base for the development of the Human and Computer Assisted Guidance Program (H.C.A.G.P.) in Pontiac. The major factors which contributed to Pontiac's receiving the research grant are discussed below.

Needs Assessment

Preparing Pontiac students for the world of work has been a joint effort between General Motors, the elected Board of Education members and public school officials. However, it has been recognized that this effort has tended to limit the scope of career exposure and preparation to the industrial area. During the past few years, several programs at the elementary and junior high levels have been developed in an attempt to broaden student exposure and preparation for career opportunities. Although a start, the programs were reaching very few students.

Historical Background

The Board of Education members and the Superintendent of Schools realized that a couple of isolated programs were not enough. In response to the need for more programs, they made the development of career preparation programs a high priority in 1970-71. The timing was perfect. The school district was preparing to implement a comprehensive integration plan, which would call for a total reorganization of the school district in September 1971. The Board members and school officials saw this reorganization as a good opportunity to concurrently reorganize the ongoing curriculum to include career preparation programs.

Also, in the 1970-71 school year, Pontiac was selected by the U.S. Office of Education to develop a school based Comprehensive Career Education Model (CCEM). The school based CCEM was one of four models being initiated and supported by the U.S. Office of Education. The CCEM was a systematic effort to design and implement a new educational strategy that would ensure that upon leaving school, students would be prepared for career pursuits whether it involved direct employment or continuing education. The CCEM sought to restructure curriculum in terms of knowledge of career and human development. Because basic attitudes and competencies begin to develop at an early age and are modified over time, use of the model emcompassed all grade levels.

Concurrently, the Michigan Vocational Education Department was interested in funding a project which would further develop the ECES (Educational and Career Computer-Based Guidance System) which had been developed by the Advanced Development Division of International Business Machines and field tested in Genessee County, Michigan. The State was interested in determining if ECES could be modified to support the counselor and teacher functions within CCEM or could be further developed into a separate transportable educational innovation for use in other Michigan schools. The goal was to determine a school district which could utilize computer technology in developing a program which would assist counselors and/or teachers in effectively and efficiently preparing students for their career choices and plans. Pontiac was selected as the site for developing such a project.

Phase I[2]

Objectives

The project was first titled the Comprehensive Career Education Model - Computer Assisted Guidance Program (CCEM-CAGP). The following objectives were addressed during the first phase of the project - February 1 through August 31, 1972:

1. To establish a core staff and supportive services to conduct the exploration and evaluation of computer assisted guidance.
2. To explore and evaluate the present ECES Program to determine its feasibility for implementation in Oakland County.
3. To integrate a student record package into the total computer assisted guidance program.
4. To design an inservice training program for all Pontiac counselors and selected teachers that will upgrade the quality and efficiency of counseling through computer-related skills.
5. To develop an evaluation design for all aspects of Phase II.

Recommendations

Utilizing local, county and consultant personnel, to accomplish the objectives above, the following recommendations were made:

1. Development of the program concept represented by the ECES syllabus component (which delivers career decision-making skills to students) to include career achievement skill delivery would provide a needed component to CCEM, is feasible, and is recommended. (Phase I, Objective 2.)
2. The human relations development skill training component of ECES was found relevant to CCEM needs, is feasible for counselors and teachers, is necessary to the development of career achievement skill programs for students, and is recommended. (Phase I, Objectives 2 and 4.)
3. Modification of the computer student interactional component of ECES to meet CCEM objectives directly was not feasible because of the major changes required and the expense of making those changes. Hence, such modification is not recommended.

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[2] Phase I Report - Revised Project in Vocational Education (Battenschlag-1972)

4. However, certain aspects of the computerized student interactional ECES component appear to have potential in support of the human and programatic approches to delivery of career achievement skills mentioned in paragraphs 1 and 2 above. Continued analysis of ECES for modification as a computer assisted system aiding in career achievement skill acquisition is recommended. (Phase I, Objective 2.)

5. The ECES student record subsystem was found of potential value to the development of a student record package which would be part of an overall computer system supporting guidance, placement, instructional, and administrative activities. However, the basic student record package, under formulation elsewhere in Oakland County, was found to be in an early development stage and partially defined. In view of the tentativeness of the basic package definition, further analysis and development of the ECES student record component are not recommended. (Phase I, Objective 3.)

In brief, the recommendations emphasize Career Achievement Skills program development, appropriate human and technical skills training, and continued development of ECES and other computer applications in support of the delivery of Career Achievement Skills to students.

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Recommendations

Program

1. The CAST objectives should be simplified.
2. The CAST curricular and instructional programs should be developed into a model lesson plan to be used at the elementary, junior high and senior high levels.
3. Control groups should be eliminated.
4. The CAST program should be delivered over the course of the year.
5. Emphasis should be on integrating CAST with other skills.

Evaluation

1. The testing instrument should be rewritten based on the model curriculum to be designed.
2. The administration and scoring procedure should be revised.

People

1. The present CAST participants should be used in different capacities next year.
2. New CAST participants should be selected and trained using local trainers and the new curriculum.

Computer

1. The computer should be continued for program monitoring.
2. A computerized Occupational Information Retrieval System should be developed.
3. The attempt to computerize the curriculum should cease until the curriculum is more well defined.

Phase III

Objectives

In summarizing the Phase II objectives, it can be said that the focus in Phase III was on the dissemination of training using local trainers in the piloting and further development of curriculum and the extension of computer applications. The following are the Phase III objectives:

1. One hundred-twenty-five elementary, 700 junior high and 200 high school students will demonstrate knowledge of career achievement skills necessary for career placement during the 1973-74 school year.
2. The 1973-74 trainees will demonstrate knowledge of interpersonal skills, educational skills and career skills necessary to deliver the CAST program during the 1973-74 school year.
3. The 1972-73 trainees will demonstrate knowledge of educational skills used for delivery of the model lesson plan to students during the school year.
4. Three elementary counselors, one junior high counselor, one junior high teacher, two senior high counselors and two administrators will conduct train ing and follow-up sessions in interpersonal skills, educational skills and career skills to new CAST participants during the summer and the 1973-74 school year.
5. The computer will be used to analyze career achievement skills test results during the 1973-74 school year.
6. Secondary CAST students during the 1973-74 school year will use a Computer Assisted Occupational Search System based on Dr. John Holland's "Self-Directed Search". (Holland 1970)

People

Students -

The teachers in the CAST program were asked to select one of their classes at random to receive the CAST instruction. These classes represented a heterogeneous group of students. The table below summarizes the breakdown of classes by numbers of students and grade level.

Grade Level	Total # of Students Receiving CAST
1	60
7	210
8	150
9	90
12	30
	440

The purpose of the CAST instruction was to deliver the following skills to students:

Goals of Curriculum

1.0 Expanding job titles to choose from using the interrogative WHAT and WHO.

2.0 Expanding and classifying jobs under headings of people or things on the basis of what people do.

3.0 Expanding and classifying jobs by interest areas for both people and thing jobs.

4.0 Expanding job awareness by classifying jobs in one or more of eight interest areas according to educational levels.

5.0 Choosing a limited set of occupations to explore.

6.0 Developing awareness of job information sources.

7.0 Developing and using questions to obtain information about jobs.

8.0 Clarifying and identifying occupational values physical, intellectual and emotional (What's important to me).

9.0 Ordering of occupational values.

10.0 Evaluating job based on personal occupational values.

11.0 Identifying specific skills through personal interview.

12.0 Evaluating oneself in relation to the job requirements.

13.0 Developing and carrying out programs for acquiring needed occupational skills.

14.0 Investigating principles that relate performance to goals to human benefit.

15.0 Reevaluating job with regard to new information.

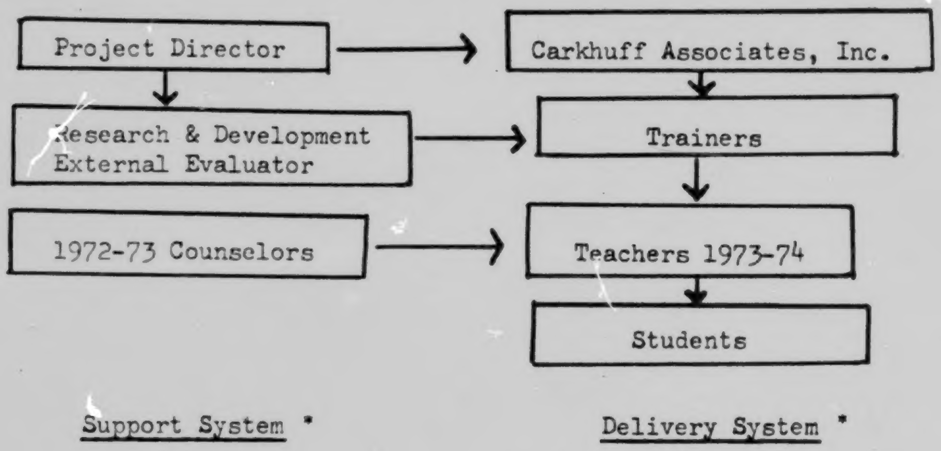
16.0 Reevaluating occupation with regard to change of values.

17.0 Investigating job with regard to promotional possibilities.

As a result of learning these skills, students have systematic process for increasing their alternatives in life in relationship to their values. This process allows them to expand their freedom to choose as well as to act on their choices.

Personnel

The diagram below illustrates the roles and relationships between various personnel in the CAST Delivery and Support System. The delivery system is composed of those people having responsibility directly affecting the delivery of the Career Achievement Skills to students. The support system is made up of those people who assist the "deliverers" by providing information, materials and/or people services which facilitate the delivery of the program. Each role and relationship will be described separately.


Project Director
Carkhuff Associates, Inc.
Research & Development External Evaluator
Trainers
1972-73 Counselors
Teachers 1973-74
Students
Support System *
Delivery System *

Delivery System

Teachers

This year's group of forty CAST teachers were selected on the same basis as last year's. (See "Training Components" section of this report for a description.)

Their primary responsibilities:

1) to be trained in a two-week workshop,
2) to deliver, once a week, the Phase II Lesson Plan Manual
3) to participate in monthly class meetings for followup training,
4) to be observed by a trainer and participate in feedback meetings on the average of once every three to four weeks, and
5) to make modifications in the curriculum and incorporate their own teaching strategies where appropriate. (The strategies were included in the Phase II Lesson Plan Manuel.) (See Appendix B)

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* Carkhuff Associates Delivery and Support Systems Model

Of the forty people who were originally selected, not all were able to start or complete the program. Approximately fifteen were not able to participate in the summer workshop due to changes in plans which occured between June and the third week in August when training began. Some who started training were unable to complete training because of moving out of the district. Of the others, two dropped out during the year because of the time involved in delivering the program which they felt prevented students from learning skills in their regular content area. Finally, two others were unable to deliver the program because of scheduling problems within their school.

Trainers

Of ten CAST trainers seven were counselors, one a teacher and two administrators. All met the following criteria:

1) mastered the human, educational and career inservice skills necessary to deliver CAST, (See description under "Training Components" section in the PROGRAM DESCRIPTION SECTION)
2) had delivered CAST the previous year and
3) were free to train and observe the 1973-74 CAST teachers.

The CAST trainers' major responsibility was to deliver skills and programs to CAST teachers. The trainers' variety of activities included the following:

1) to participate as trainer-interns for three days learning training skills,
2) to inservice trainees in human, educational and career skills in a two-week workshop,
3) to make weekly and monthly observations of CAST teachers,
4) to set up monthly feedback sessions with CAST teachers,
5) to conduct monthly CAST training meetings,
6) to attend monthly training meetings with a member of Carkhuff Associates,
7) to attend weekly CAST trainer planning meetings,
8) to coordinate internships within their building, and
9) to develop training material as needed.

Carkhuff Associates

Two members of Carkhuff Associates served as consultants and master trainers for the CAST project. (See Appendix F for their contract and see "Consultant Report" in Appendix V for their final report. Dr. Ted Friel worked with the trainers and teachers in human and career skills during the summer inservice training. Dr. Friel and the Project Director were responsible for the development of the career assessment instrument. Dr. David Berenson had responsibliity for the educational part of the summer training and for the development of the teacher observation instrument. He also trained the trainers monthly in classroom observation, teacher diagnosis, goal setting and program development skills. His major responsibilities were:

1) to support the trainers so that they could take primary responsibility in delivering the human, educational and career skills and in conducting follow-up training with the teacher,
2) to advise the Project Director as to content and/or operational problem areas, and
3) to develop programs in response to these problems.

Support System

1972-73 CAST Counselors

The five counselors (who were not trainers) who were in the program last year could not be freed to deliver the CAST program because of other responsibilities. However, several supported the CAST teachers in their buildings by providing career information, setting up role models and coordinating internships.

Research and Development

The project required half-time services from Mr. Al Pavlish, Assistant Director of the Pontiac Research and Development Department. Mr. Pavlish's responsibilities were:

1) to develop the occupational information retrieval system,
2) to analyze all CAST data
3) to consult with the project director on research questions and procedures, and
4) to monitor the evaluation process.
5) to write the CAST Evaluation Report (See PROGRAM EVALUATION SECTION)

External Evaluator

The external evaluation, Dr. Theodore Ploughman, had as his primary function that of auditing and verifying all data collected by the Pontiac Research Development Department as well as Carkhuff Associates. (See Appendix E for his contract and "External Evaluator's Report" in Appendix U.

Project Director

The Project Director had the following responsibilities:

1. Defining project policies and procedures.
2. Monitoring the training component, curriculum development and delivery component and the evaluation component of the project.
3. Developing the research design.
4. Developing the teacher and student assessment and evaluation instruments with assistance from the Carkhuff consultants.

Conclusions

Using the Carkhuff delivery and support systems model helped to define and describe CAST participants roles and relationships in terms of student outcomes. It was extremely realiable to the Project Director in planning, organizing, and implimenting tasks. In addition it provided a visual schema of communicating relationships and responsibilities to others.

Training Component

Organization -

In order to insure that all members of the delivery system had the skills necessary to teach students, training was necessary.

The following pages will explain the purpose and the component of the Career Achievement Skills Training which are listed below:

1) Selection of Participants
2) Preparation
3) Training Procedure
4) Teacher Observation
5) Follow-up Training
6) Trainer Observation Training
7) Materials and
8) Recommendations for future training.

An initial two-week summer training was conducted from 8:00 - 5:00 p.m. for approximately 25 selected teachers and counselors who were paid and received university credit for their participation. This initial training was led by Dr. Ted Friel and Dr. David Berenson and eight Pontiac trainers who had been in the CAST program the previous year and were serving as trainer interns. Following the summer training the Pontiac trainers assumed responsibility for all follow-up observations and training.

Purpose of Training -

One of the purposes of the CAST training was to insure that CAST teachers and counselors could first do the skills they were teaching their students. A second purpose was to give to the teachers and counselors the skills they needed to further develop and deliver the CAST program. Another purpose was the development of trainers who could continue the dissemination of the skills to others.

This training is based on Dr. Carkhuff's philosophy that the effectiveness of a program is a function of the skills of the people training, those delivering the program to students, as well as the effectiveness of the programs developed. So to insure the highest level of delivery and development in the CAST program - training was essential.

Content of Training

Human Skills

Representatives from Carkhuff Associates, assisted by the Pontiac trainers, conducted an inservice workshop which delivered human skills, such as: attending, responding and initiating. These skills are verbal and non-verbal communication skills which allowed a "helper" to explore and communicate to the "helpee" where he is, where he wants to go, and how to help him get there. In addition, the "helper" uses problem solving or decision-making skills to help the "helpee" understand what alternative courses of action are open to him and to have him decide what alternative is best for him. The "helper" uses action skills to help the "helpee" develop a program which can help him act on his understanding and move him from where he is to where he wants or needs to be. (The above skills are found in the books The Art of Helping (Carkhuff 1972) and The Art of Problem Solving (Carkhuff 1974).

Education Skills

Also, the workshop addressed the education skills of diagnosing, goal setting, program (curriculum) development, teaching methods, learning strategies and classroom management. The first three skills help a teacher and counselor assess in which skill area, related to the subject matter, the student is having problems. These skills then allow the teacher and counselor to determine a goal for that student and then to develop a step by step program by which the student can reach the goal. The teacher and counselor then selects their teaching methods and strategies to reflect the skill being taught and the learning style of the student. Classroom management techniques are used to differentially reinforce student performance. (These skills are introduced in The Art of Teaching (Carkhuff, Berenson, Pierce 1974)

Career Skills

Finally, the workshop addressed the Career Achievement Skills of expanding, narrowing and action. The three Career Achievement Skills deal primarily with helping students expand information about themselves and jobs, giving them a way to decide among alternative choices and then providing them the skills to prepare for their choice. (These skills are found in The Art of Developing a Career (Friel and Carkhuff 1974)

Selection of Participants -

All Pontiac teachers and counselors were asked to apply for participation in the CAST program by completing a human, education and career selection inventories developed by Carkhuff Associates.[4] Teachers were chosen based on their inventory scores, grade level and availability for a two-week workshop in August 1973. Content area was not considered important in the selection criteria. We were trying to identify effective teachers who could develop, deliver and disseminate the student and teacher skills. Therefore, their content specialty was secondary to their overall effectiveness in the human, education and career skill areas.

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[4] Samples and a description of the inventories can be found in the Phase III Final Report PROGRAM EVALUATION SECTION.

Preparation for Training -

All of the CAST teachers were sent a pre-training assignment so that they would have some base of understanding before training began. They were asked:

1) to read The Art of Teaching, (Carkhuff, Berenson, Pierce 1974) The Art of Helping (Carkhuff 1972), The Art of Developing a Career (Friel and Carkhuff 1974), and The Art of Problem Solving. (Carkhuff 1974)
2) to select the parts which related most closely to their need
3) to discuss these sections during the first class.

Training Procedures -

The training outline was as follows:

1) An overview of the project objectives was presented and the teacher's role and responsibilities defined.
2) An overview of the human, educational and career training was given and related to the project goals which were presented in terms of student outcomes.
3) Training conditions and expectations were explained.
4) The two-week training schedule was previewed.

Mornings

1) The human achievement modules were presented, based on Dr. Carkhuff's book The Art of Helping (Carkhuff 1972), and The Art of Teaching (Carkhuff, Berenson, Pierce 1974) This was done in a large group.
2) The human achievement or interpersonal skills were then practiced in small groups with two people playing the roles of helper and helpee while the rest of the group gave feedback. Each group had a trainer who was a counselor from last year's program. The trainer had primary responsibility for providing direction and feedback for the group.
3) The homework assignment was given. The teachers and counselors were to practice the skills they learned and to write down what happened as a result of their use. These results would be shared the following morning.

Afternoons

1) The career achievement skills were taught in a large group to the teachers and counselors using the Phase II Lesson Plan Manual. (See Appendix B)
2) The elementary and junior high comic book, The Story of Who (Friel and Carkhuff 1974) was used as a visual model for the CAST program.
3) The Art of Problem Solving (Carkhuff 1974) was given as a homework assignment along with the career decision-making assignment.
4) The career achievement homework assignment was having the teachers and counselors become students and do the lessons in the Phase II Lesson Plan Manual. It was felt that only if the participants had gone through the manual as a student would they be able to effectively deliver the program to their students. In addition, they were asked to list ways they might deliver each lesson. This gave each teacher a pool of strategies from which he/she could choose in delivering his/her lesson.

Second Week Afternoons

After the teachers and counselors were familiar with the career skills, the afternoons were spent learning the educational skills necessary to further develop and deliver the CAST program. The Art of Teaching (Carkhuff, Berenson, Pierce 1974) served as the basis for this training. Teachers and counselors developed and practiced delivering their own lesson plans to other members of the group. The group members would then rate them as to how well they used the human, educational and career skills they had learned.

Evaluation

Teachers were evaluated on the same paper and pencil inventory they had taken in the beginning of the program. This gave some indication of their growth due to training.

Classroom Observations

Follow-up is the key to effective implementation of any inservice program. Teaching skills during a two-week workshop does not assure that they will be used correctly in the classroom. The reason for this is the conditions of training are vastly different than the conditions in the classroom. Therefore, to insure that all teachers could, in fact, use the human, education and career skills in their classroom delivery, periodic classroom observations were made by the trainers.

This was achieved by assigning each trainer one or two teachers to observe and follow-up. Where teachers and trainers were in the same building, those trainers observed those teachers. In the other cases, the trainers had flexible schedules which allowed them to observe the other teachers in their respective buildings.

Scheduling of observations was handled between the teacher and trainer. In the beginning, each trainer visited the classroom once a week for the entire CAST class period. As teachers became more comfortable and proficient in their delivery the frequency of visits was much less and for shorter periods of time. On the average each teacher was observed approximately five times from November to May.

During these visits, the trainer was assessing how effectively the teacher was presenting the career content as well as the effectiveness of his/her human and educational delivery skills. To perform the assessment, the trainers used an observational checklist developed by Carkhuff Associates personnel. (See Appendix A) The checklist is divided into the following five sections used to record the organization of lesson plan delivery:

Review - Inform students what skills they had learned previously.
Overview - Relate those skills to the new skills for that day and to the ultimate goals of the program.
Presentation - Make available the facts, concepts, principles and discrimination the students need to acquire and maintain the skills.
Exercise - Allow students to practice the new skill.
Summary - Reinforce the day's lesson skills and relate to tomorrow's skills.

Within each of the above five sections the following teacher skill areas were observed and rated.

1) Methods - How teachers presented material.
2) Content - At what cognitive level the material was presented.
3) Strategies - If and to what degree the teachers envolved the students in the learning process.
4) Attending - Description of the relative physical positioning of the teacher and student.
5) Responding - Quality of verbal interaction .
6) Reinforcement - Use of verbal teacher behavior to direct students behavior toward a predetermined goal.

Using a five-point scale developed for each area, the trainer would record all the teacher's behaviors for a 45-minute period. At the end of the observation, the trainer would have a profile of the teacher's delivery in each of these areas. Based on this information the trainer would briefly give feedback to the teacher and would make an appointment so that the teacher and trainer could discuss the observational checklist.

During these follow-up sessions the teachers and trainers discussed the career content, presentation and the delivery and how they could be improved. The checklist was used to select the area where the teacher had the greatest chance of improvement. Together, teacher and trainer set a behavioral goal within the deficient area and wrote a program which the teacher would practice for the next observation.

Teacher Observational Training

In order to observe and develop these programs for teachers, the trainers had to be trained. This observation training was conducted monthly by Dr. David Berenson. At this time problems and areas of concern regarding any part of the observation and follow-up sessions were discussed and programs developed to alleviate them. Here is an example of one trainer observational program:

Trainer Observation Program

1. Set up appointment with trainee.
2. Observe for one hour a week at first until you can discriminate areas of greatest need.
3. Respond to strength.
4. Initiate goal and program for area needing attention.
5. Develop small programs so that they can be achieved in one week's time.
6. Feedback to me on Friday major areas needing to addressed at university class.

Teacher Follow-Up Training

One night a month the teachers in the CAST program met with the trainers for follow-up training sessions for which they received credit from

Wayne State University. The skills the teachers were having difficulty with were reviewed and practiced. Teachers made tapes of their classroom sessions and reviewed them with their trainer to discuss strengths and weaknesses.

These classes were valuable to the teacher and trainer. Teachers received additional skills and programs plus help in those areas where it was needed. Trainers had a chance to assess where the group stood in relationship to the skills being addressed and could develop their programs to help the teachers.

Outcomes and Recommendations

The following training areas were discussed and recommendations made by the CAST teachers in a final evaluation session at the end of Phase III. The Project Director has summarized their comments and recommendations under the following training areas.

Human Skills

All participants felt the need for more training on the human skills. They recommended that the training proceed at a slower pace allowing them enough time to internalize their new discriminations and skills before moving on to the next training piece. In addition, they felt that the human skills should be introduced and practiced within their own content area before being introduced in the career area. Introducing the human skills in the context of a new content area (career) made the learning of the human or interpersonal skills somewhat difficult.

Also, they recommended practicing the human skills in a large group setting, in addition to the one to one practice, so that they could learn to use the skills under conditions similar to their classroom setting. Finally, they felt that taping the training sessions as well as their classroom delivery would help them make finer discriminations in assessing their own human skill development.

Educational Skills

As in the human skills, the participants urged that more time be spent learning the educational skills. Particularly emphasis they felt should be placed on developing learning strategies and content (facts, concepts, principles, skills and programs) skills in these areas would assist the teachers in individualizing and extending the curriculum to meet the needs of their students in their class. The teachers also recommended spending more time developing strategies for delivering the career skills so that they could have been more prepared when beginning to teach CAST.

Career Skills

The teachers felt going through the CAST program as students themselves, was essential. In this way mastery of the content was more assured. Once having learned the career content skills they could practice the delivery process which includes the use of the human or interpersonal skills and the educational skills. Teachers trying to be both student and CAST teacher at the same time they got confused. When this happens their understanding of the integration and relationship of the human and the career skills is incomplete.

General Comments

Of all the training skills the teachers felt that the human and educational skills to be the most valuable. They felt that these skills had helped them grow personally and professionally. (See Appendix T) These are also the skills that were most generalized into their own content areas. Thus, they were seeing positive results in their speciality area as well as in the career area.

Observations

(See Appendix A for our checklist)

The teachers felt there was a need for fewer and more indepth assessment (finer discriminations) of the teachers deficit area so that programs could be tailored to individual needs. Some teachers felt that more time should be spent giving feedback on one skill area of deficit while other teachers felt they wanted to know about all areas. They also recommended that one skill area be focused on and programs developed and practiced before moving on to another skill area. Jumping ahead before mastery of any area left the teachers frustrated and unsure of their progress. The teachers suggested that one way to overcome their frustrated feelings was to use a recording system where the teachers could chart their progress so that they could see their own growth as they mastered each skill area.

Follow-up Training

Most teachers found the Wayne State University class to be helpful in providing them a chance to receive feedback and training in new skill areas. However, it was suggested that more time should have been spent on skill training and less on information giving. In other words, the content of the class could have dealt more specifically with the areas targeted from classroom observations. The teachers did feel that this class was beneficial in helping them bridge the gap between the summer inservice and their classroom delivery.

Conclusions and Suggestions

The following statements are general conclusions drawn from the Outcomes and Recommendations Section:

1. CAST inservice training is recommended for delivery of the CAST program.
2. The amount of training is dependent on the level of functioning of the trainees.
3. The quality of training is dependent on the level of functioning of the trainers and the level of their training program.
4. The training should be composed of human, education and career skills.
5. Follow-up training should continue all year and should be based on the observed needs of the teachers and counselors.
6. Teachers and counselors should be trained to transfer the skills into their own content area.
7. Classroom observations are essential to insure that the teachers and counselors are using the skills appropriately.
8. University credit should be given for the depth and extensiveness of this training.
9. Teachers and counselors who have delivered the program effectively and have the skills to train others should become trainers of the next group of teachers and counselors.
10. Teachers and counselors grow personally as well as professionally from the training.

Some suggestions to those readers who are interested in using the CAST program but are not sure whether or not training is necessary.

1. Assess your teachers to see if they can do the CAST skills.
2. If they can't, find someone who can teach them. (This someone should have delivered the CAST program successfully like the Carkhuff consultants or the Pontiac CAST trainers.)
3. If you can't find or afford someone to teach them, I would suggest this simple training procedure after first having had the teacher read The Work Skills Series.

A. Using the Phase II Lesson Plan Manual, have the teachers read and do the lessons as students.

B. Then have them write their own lesson to deliver the CAST objectives. (Encourage them to increase the number and quality of their methods and strategies.)

C. Have them practice delivering their lesson to the group.

D. Have the group give feedback as to strength and weakness of the delivery.

E. Have teachers use the Phase III Lesson Plan Manual with the Working Skills Series as support to deliver the program to their students.

F. Have a master teacher who is delivering the program observe the teachers.

G. Provide ongoing sessions where teachers can discuss their material,problems and concerns.

The above training procedure is only recommended after all other training alternatives have been exhausted. By using the Carkhuff consultants and/or Pontiac CAST trainers a level and quality of program delivery can be assured. Because we have never delivered the program without consultant trainers, it is impossible to state whether or not the CAST program would be successful in your site without this support. This is an important question to be researched.

If you are interested in delivering CAST in your setting,and want help, write Project CAST/PALS, Irving Elementary School, 1830 W. Square Lake Road, Pontiac, Michigan.

Also, if you want or need consultant help, contact Carkhuff Associates, P. O. Box 228, Amherst, Massachusetts 01002.

Curriculum Component

Curriculum Development

As was explained in the preceeding section, during Phase II of the project, teachers and counselors were trained by Dr. Ted Friel, Dr. David Berenson and Dr. Richard Pierce from Carkhuff Associates to develop and deliver this Career Achievement Skills Training (CAST) program.

Using the books from the Carkhuff Working Skills and Life Skills Series (Carkhuff 1973) and their curriculum development skills learned in the Carkhuff inservice training, the teachers and counselors developed their own lessons which they used to deliver the CAST objectives.

At the end of Phase II all teachers' and counselors' revised and modified lesson plans were reviewed by two CAST participants and developed into a Phase II Junior High Lesson Plan Manual. (Appendix B) These lessons included two components: 1) "Student Procedure Sheets" - behavioral and sequential steps leading to attainment of the career skill. 2) "Teacher Procedure Sheets" - instructional program steps containing a method and strategy for teachers and counselors to use in teaching the student steps.

This Phase II Lesson Plan Manual was developed primarily as a tool to use during Phase III of the project in training the new CAST participants in the CAST skills they would be teaching their students. The junior high and high school teachers and counselors used the Phase II manual as written, while the elementary teachers and counselors had to modify and simplify some of the skills and methods as they proceeded.

After using the Phase II Junior High Lesson Plan Manual during Phase III of the project again revisions and grade level changes were found to be necessary. (See PROGRAM DESCRIPTION SECTION of the Phase III Final Report for a description of the changes) Therefore, during the last month of Phase III the following major changes in the Phase II Lesson Plan Manual were made:

1. The Phase II Junior High Lesson Plan Manual was revised and a Phase III Junior High Lesson Plan Manual developed.
2. From the Phase II Junior High Lesson Plan Manual a Lower Elementary and Upper Elementary Phase III Lesson Plan Manual was developed which contained most of the skills presented at the junior high level, but simplified and related to the developmental needs of elementary school students.

These Phase III manuals were developed primarily for use by the teachers and counselors as delivery tools not as inservice training tools as described in the Phase II manual. Thus, the reason for the change in purpose of the Phase III manual was because the teachers and counselors had already acquired the career skills using the Phase II manual and thus thoroughly knew the learning process necessary to achieve the CAST skills. What they needed was a lesson plan manual which would provide them an increased number of methods, strategies, programs and resources from which they could draw upon to teach the learning process and thus increase their chance of reaching more students. Therefore, the Phase III Lesson Plan Manuals were developed to meet their need.

Outcomes and Recommendations

There were a few problems with the Phase II Lesson Plan Manual. In the beginning, for example, the teachers felt that the lessons were too lock-step and little room was given for adding any of their own ideas and activities. However, over time the teachers felt more comfortable with the program and modified, deleted and added activities when needed. In addition, they felt the students were filling out too many charts and stressed the need to balance the charting process. They recommended that the lesson plan include more ideas for activities from which the teachers could choose. With a range of activities, all students could successfully progress at their own level and rate. Finally, they felt the expanding area could have been more extensive because students need a broader understanding of jobs and themselves before they move into the narrowing process.

Based on these recommendations, a Phase III Elementary and Junior High Lesson Plan Manual was developed. Some of the changes included:

1) Resequencing some objectives,
2) Combining one and two objectives in one lesson,
3) Leaving out some objectives (14 and 17) which were too difficult for our students at this time.
4) Simplifying the decision-making process,
5) Combining the teacher and student procedures on one page,
6) Adding support programs - parent - counselor,
7) Adding activities which would relate the career skills to other content areas.
8) Taking the major objectives and developing an upper and lower elementary lesson plan manual.

If these Phase III Lesson Plan Manuals are to be used appropriately teachers must first be trained in the skills they expect their students to acquire. Thus, it is recommended that the Phase II Lesson Plan Manual be used (along with the books from the Carkhuff Working Skills and Life Skills Series) as a tool to train teachers in acquiring the learning process of the CAST skills while the Phase III manuals be used in training teachers in delivering the CAST skills to their students.

Additional Outcomes

At the senior high level the CAST project was extended and administered under a new project called Pontiac Adult-Student Learning System (PALS). (See "Other Information" in the PROGRAM EVALUATION SECTION)

The Pontiac Adult-Student Learning System is an academic class offered to high school students within the Pontiac School District. This course teaches students communication skills which are necessary in dealing with adult employees, the decision-making process which they use in selecting an internship, and program development skills which the students use in developing programs to take them from where they are to where they want to be. The students spend approximately 25 classroom hours examining their skills, values, aspirations and career alternatives. Following and as a result of the classroom experience, the students use their decision-making skills to select jobs within the community on which they will be placed as an intern. The students spend a minumum of one hour a day for five to six weeks observing as adult employee so that they can identify the skills necessary to hold down that job.

Conclusions

Teachers and counselors need to be trained in how to develop their own CAST lessons so that they can break down the skills when necessary and can develop individual programs for students . Handing teachers a "prepared cookbook curriculum" does not leave room for them in the development or delivery process. Thus, the program is not really theirs.

Different parts of the CAST program need to be emphasized at different grade levels. Thus, the lesson plan manuals can serve as guides for teachers in their delivery. Ideally, students should learn a rudimentary version of CAST in their kindergarten and early elementary years (Phase III Lesson Plan Manual - Lower Elementary). They would develop their skills further in the later elementary years (Phase III Lesson Plan Manual - Upper Elementary) and increase the complexity and time spent on the skills during the junior high years (Phase III Lesson Plan Manual - Junior High). Finally, at the high school level the students would learn the skills at a more sophisticated level and with greater profeciency (Idea Book for a Secondary Career Education

Program - PALS Project Curriculum). Using these lesson plan manuals as guides, the teachers and counselors can continue to add their ideas for delivery, thus increasing the quality and quantity of their teaching methods.

Curriculum Delivery -

The delivery schedules varied with classes and grade level. At the elementary level, the teachers delivered the program 2-3 times per week in half-hour blocks. The 7th and 8th grade junior high programs were somewhat more sporadic. Most of the teachers didn't get started until October as they wanted to get their own content area under way. Then they taught the program once per week if possible. Sometimes they had to skip a week or two depending on vacations, other priorities, etc. The 9th grade program was different still. It was being taught in a nine-week mini-course.

Outcomes and Recommendations

There were some problems with the delivery time schedule at the junior high level. Spreading the delivery over a one-year period was too long a span of time for our students. Continuity and daily reinforcement of the skills were lost. Too much time was spent in reviewing the skills that had been previously taught, rather than in practicing the new skill. The following alternative ways of delivering the program were recommended:

1 - With the program spread out many students lost interest in working toward their internships. A year was too long to use the internship as a reward.

2 - The program should be taught early in the year so students have a chance to get out on their internships while their motivation is high.

Many teachers faced internal scheduling conflicts. Conflicts in finding time to deliver their regular subjects and the career program. It was recommended that time be spent on reorganizing their subject matter content as to deliver it more efficiently. One way of doing this is to integrate the career skills within their subjects. Another way is to tighten their subject matter delivery so there is a block of time for careers.

At the elementary level, the teachers delivered the program in ½ hour blocks 2-3 times per week. This frequency and amount of time for each delivery worked out very well as the young students needed the skills introduced in smaller pieces and also needed more time to practice each piece.

Recommendations at the junior high level -

1) Have teachers teach the program every day in a three-week block of time or at least three times per week.
2) Set up a 10-week mini-course or a semester course so that all the skills could be delivered thoroughly.
3) Have the counselor deliver part of the program with the classroom teacher.
4) Have the counselor deliver the CAST program as a course.
5) Use skills within regular content area where ever possible.
6) Emphasize exploration and decision-making at junior high level.

Recommendations at the elementary level -

1) Start the program at the beginning of the year and continue it throughout the year.
2) Integrate the CAST program with subject area.
3) Emphasize exploration phase at elementary level.

Conclusions

The CAST Program should be delivered in one block of time even if it means delivering only one part of the program for each of the expanding, narrowing or preparing sections. To spread the program out over a long period of time delutes its effectiveness.

The CAST program is best delivered where a teacher and counselor can work together each delivering the areas for which they are best prepared.

The CAST program should be integrated with the existing curriculum wherever possible. This entails having classroom teachers reevaluate what they are teaching and why they are teaching it and how they are teaching it. Only if their own content delivery is tightened will there be time to deliver CAST.

Wherever possible teachers delivering CAST should plan and coordinate efforts in their delivery. In this way the benefits of each teacher's unique contributions are shared among all students.

Internship Component

Description

The internship experience was the heart of the CAST program. CAST students spent an hour or more with a person working in the job which the students has selected using the decision-making process they had learned. Small and large groups of students exploring the same job would observe the work setting and then, interview the employee by asking questions about what ws required of him/her on the job. With this information, the students would re-evaluate their decision to determine if the job was more or less favorable to them based on the new information acquired from their "people source". (Students in CAST learned to gather information for their decision from people and thing sources - the internship was the main people source.)

As mentioned above, the size of the group varied with internships. Some internships involved two or three students and others as many as 20. The larger groups were interested in exploring the jobs of secretary, lawyer, forest ranger, stewardess, nurse, doctor, engineer, police person, teacher and sports. The smaller groups explored archeologist, accountant, writer, astronaut and actress.

Coordination

An internship aide was hired to coordinate the internship arrangements between three schools. This was a total of eight classes and some 200 students. She worked approximately 15 hours per week for five weeks. Her major responsibilities included:

1) scheduling internships,
2) finding internship contacts,
3) securing internship placements,
4) arranging transportation,
5) utilizing support people,

Scheduling Internships

Internships were scheduled at the convenience of the 30 participating employers. Thus, the students would be scheduled for an internship anytime during the school day or on the weekend, if necessary. Because the students were being taken out of class, the internships were kept to an hour. The entire internship program itself was scheduled over a three to four week period, beginning the first part of April.

Finding Internship Contacts

Many groups of people were used as sources for internship contacts. Parents, trainers, friends and teachers were used to generate names of people to contact for Internship Placements. These names were kept in an Internship Contact File. This file was begun last year for the internship program and served as a good source of names.

Securing Internship Placements

Local people were utilized as internship placements for the students' selected jobs. Occasionally students would have to go out of town, but this was kept to minimum because 1) local involvement of business and industry personnel in the career program was encouraged and 2) transportation costs were to be minimal.

Employers were first contacted by phone and explained the purpose of the CAST program and their role in the internship phase. Then a date and time was set up for the internship. They were sent a list of student questions which they were required to answer when the students arrived. After the internship, the employers were sent a thank you letter and a postal card on which to write their responses concerning the internship.

Arranging Transportation

Finding adequate transportation was difficult. School buses could not be used, so parents, teachers and counselors drove where possible. In addition, some project money was spent to rent a mini-bus which transported fifteen students at one time.

Utilizing Support People

While the internship aide prepared the employers for the students, the teachers prepared the students for the employers. Teachers had students prepare questions to ask and then, had the students practice their interview programs. In addition, the students developed internship readiness programs which included sending a letter to their parents explaining the internship, getting permission from their parents, as well as clearing their absence with other teachers. (See the Phase III Lesson Plan Manual)* Following the internships, the students evaluated them as to whether or not they would recommend the placement for the following year.

Teachers were notified prior to the internship as to what students would be going on their internships, on what day and at what time. If a driver or adult supervisor (an adult who would accompany the students on their internship) was needed, the teacher would be asked for suggestions. (If at all possible, the teachers would go with their students.) The internship aide would check with the teachers following the internship to assess how valuable the students had found the experience.

Counselors (trainers) were utilized as a liason between the teacher and the internship aide. They assisted with transportation and internship placement needs. They were also informed as to what and when students were going on internships, so that they could help supervise the arrangements.

* For information see Appendix L

Outcomes and Recommendations

The following paragraphs will address the major outcomes of the internship program and will include recommendations for planning future internships.

Internship Coordination

Although having a part-time aide arrange internships saved the teacher time, it did create communication and coordination problems within and between schools. Many teachers felt they did not have the time to coordinate the internships. Others felt, if given time, they were in a better position to arrange internships around their own schedules and for their own students. This would give them a greater responsibility for the success of the internship if their time was invested in coordinating the internship program. Working through a second party, they felt, caused them to lose some of their close involvement with the internship program. It also complicated the communication of information to all the people affected by the internship program. Thus, the following alternatives were suggested for internship coordination.

1. Each teacher coordinates his/her own internships. Time must be given to make contact, placements and secure transportation. For example, substitutes could be used to release the teacher to plan internships.
2. All teachers within one school who are involved in the CAST program could coordinate their internship efforts, share contacts, placements, buses, etc.
3. An internship aide within each building could arrange all internships and in addition, an overall coordinator could be hired who had public relations, community and CAST background.
4. School counselors could secure internships.
5. Students could find their own internships.

In general, it was felt that teachers should be involved, to some degree, in coordinating the internships because of the importance of the program in enhancing teacher-community relationships. The internship program allowed community personnel and teachers to communicate about the educational needs of students. It offered both teachers and community personnel an opportunity to work together in a very concrete way. It gave both parties a chance to see the role the other played and could play in helping young people plan their career.

Finally, it allowed students the opportunity to learn how to use community resources as a rich source of learning about themselves and others.

Scheduling Internships

It was difficult scheduling all internships in a three to four week block. There would be more opportunities for including different kinds of internships if the coordinator could offer the employer a wider range of alternative dates. Also, if the employer contacts were made early in the year for those jobs in which most students wanted internships, then there would not be the rush to set them all up at once. If the internships were staggered over a two-month period, then this would be less disruptive for the teachers whose classes they would be missing.

Finding Internship Contacts

Finding internship contacts was not difficult for the internship aide. The following steps, which she followed in identifying names and arranging the internships, were also recommended for the classroom teacher.

1. Send a letter to parents asking for names of potential internship contacts.
2. Contact personal friends and have them ask their friends.
3. Ask other teachers to contact their friends for names.
4. Use local or county Career Speaker Resource File. (The CAST Internship File from last year's internship placement was a valuable resource--each school could have their own file which could be added to each time an internship placement was made.)

A major recommendation concerned using the computer to file all the names of people willing to give their time for internships. This would include all the past internship contacts. The computer would allow immediate retrieval of their names, addresses and frequency of use of possible internships. This information must be easily updated and should provide some form of evaluation by the student as to the appropriativeness of the internship.

Securing Internship Placements

More lead time was necessary for internship placements. It was recommended that as soon as the students have selected their two jobs, the internship contacts should be made. A two-month block of time should be allowed for these placements. It was also recommended that employers be better prepared for their intern student. The following are recommended steps to improve the internships.

1. Contact employer and explain the CAST program and reason for the internship.
2. Explain what he/she can expect from students as well as what students can expect from him. Also, find out any special instructions needed for internship.
3. Arrange time and date for internship.
4. Send him/her a letter explaining what questions the students will be asking as well as reminding him of what he/she has promised to do for the students. Include the list of students, the name of the adult supervisor, the date and time of the internship. (If this arrangement is being made far in advance, a reminder should be sent to the employer a little before the internship.)
5. Visit employer personally before the internship, if possible. This would allow the teacher to explain step by step what the employer would have to do for the internship as well as answer any of his/her questions. This visit would be particularly helpful in briefing the employer on how he might deal with different age levels.

Arranging Transportation

Locating transportation was the most difficult part of the internship program this year. Several strategies were recommended. One recommendation was that if school buses were not available, all possible parent drivers should be contacted early in the school year, so that a driver pool could be formed. Then when drivers would be needed, there would be a list from which to work. If large numbers of classes were involved, two or three full-time drivers might be hired to shuttle students to and from internships. It was also recommended that counselors, principals and community workers be used to transport students.

Utilizing Support People

The participants felt that the students were well prepared. The only suggestions were that the students write out their questions beforehand, so that they would be assured of getting all of their questions answered. The participants strongly felt that after the internships the students should objectively evaluate the experience as to its appropriateness for future internships. This might eliminate those people who believe that a "quick trip around the place" was the goal of an internship.

The counselor's role was seen as a coordinator, chaffeur and, by some, as the deliverer of the program either in its entirety or at least those parts dealing with internships and decision making.

General Suggestions

Internship Alternatives

Because of internship transportation problems and students lacking interview experience, it was strongly recommended that a series of graduated internship experiences be established. This would help keep the transportation needs to a minimum and would insure that students would not be sent out on an internship until they were ready to handle the experience. Such a plan might look like the following, which includes a series of steps starting with the least difficult and ending with the most difficult.

10 Internship - alone for minimum of one hour at employer's place of business
9 Internship - group (3-6) for minimum of one hour at employer's place of business
8 Interview role model in class - alone
7 Interview role model in class - part of panel or in group
6 Ask questions as part of group on field trip
5 Observe and write down questions to ask while on field trip
4 Interview school person in class - alone
3 Interview school person - part of panel or in group
2 Interview parent at home
1 Role play interview in class

The teachers unanimously agreed that every student must have some level of internship. Different grade levels could select the appropriate internships from the above list. With the above steps a student could start at the beginning of the CAST program with a level one internship and progress to whatever level is possible for that student. Or, a student could start with a level ten internship and develop that particular internship throughout the program.

Students could be assessed as to what step they could easily accomplish and their internship could be the next step in this sequence. Also students could rate each other on the effectiveness of their interviewing skills. This internship plan has the following advantages:

1. Having students practice interviewing many role models and going out on several class field trips will expose all students to many jobs other than the one they are exploring.
2. In this way, the students and teachers receive a more general coverage of career information. It also breaks down job stereotypes (racial, ethnic and sexual) by presenting a variety of role models.
3. This exposure also serves as a motivator to students to work hard for an individual internship.
4. Having role models come in to the school gives parents a chance to participate in the program.
5. Role model visits could be shared with other classes not in the CAST program. This might encourage other teachers to get involved.

Size of Group

The size of the internship group should be from three to six. It was found that in groups smaller than three, students were reluctant to ask questions. In larger groups, all students could not get the opportunity to practice asking their questions. Some employers prefer a larger group because it appears more efficient. However, employees need to understand the difference between a field trip (which is what most of them are accustomed to) and an internship.

Teacher Participant on Internship

There was a definite split on the participants' feelings towards their involvement in the actual internships. Some felt that they had no business on the internship because that would take away from the student in that the employer would tend to address his/her remarks to the teacher and not to the student. Some felt that it was important to the student to do this "on their own". The other teachers felt that the following were definite benefits to their participation:

1. They could "get a feeling" for what their students were experiencing so that they could better understand the student's feelings regarding the internships.

2. It would give them an opportunity to evaluate the employer.
3. They could evaluate how well their students asked questions.
4. They could guide students' questioning, where necessary. If a parent or other adult supervisor is used, he/she should be prepared as to what their responsibilities should be.
5. They could evaluate how well their students' questions were answered.
6. They could help students interpret the information in relationship to their values.
7. They could help students discriminate between the job and personality of the employer.

Teacher Selection of Internships

Teachers should decide what kind of internship would be most appropriate for their grade level. At the early grade level, CAST teachers used parents and role models as internships within the school. At the junior high level, most of the students went out on internships.

Teachers should decide how many internships they want and how many times throughout the year they want to schedule them. CAST teachers could only schedule one internship for each student, but it was recommended that students have as many internship or interview experiences as possible.

Parent Involvement

A Parent Involvement program was highly recommended. This would begin at the start of the CAST program. Suggestions for such a program may be found in the Phase III Lesson Plan Manuals.

Conclusions

The internship component is the "placement" step in the CAST program. It provides the students an opportunity to test out their understanding of themselves and the job which they have been exploring in a realistic setting. Reevaluating the information gained from this internship experience is the point at which the recycling process of expanding, narrowing and preparing begins again.

Without the internship the CAST program would be only a cognitive exercise. Therefore, it is critical that the internship program be well planned and organized so that all students receive maximum benefit from their experience.

Computer Assisted Occupational Search

Purpose

Before going on their internships, it was recognized that students need help in exploring their interests and in expanding jobs. It was decided an interest or occupational survey might be an interesting technique to use with CAST students in helping expand their information base before beginning to narrow. After looking at several occupational surveys, it was decided to use Dr. John Holland's"Self Directed Search." (Holland - 1970) since

1. it could easily be computerized for ease of scoring,
2. if computerized, it could be administered in half an hour,
3. it related activities, interests and self estimates to job alternatives, which paralleled the CAST program, and
4. it could be modified to use with junior high school students.

Dr. Holland was contacted and permission granted to use the instrument. (See Appendix C)

One purpose of the "Self Directed Search" is to help students explore their interests and abilities in relationship to workers who have the same abilities and interests. Having to respond to the questions helps students look at specific activities which they like and competencies in which they excell. It also helps students become aware of the discrepancies between their interests and abilities.

Another purpose is to provide the students with a list of jobs which they can use as a basis for further exploration. The link between students' interests and their list of jobs is a job code. The job code is based on six job personality types - realistic, investigative, artistic, social, enterprising and conventional. All jobs included in the job bank are described by a three letter code combination. For example, the code ESC for salesman means that salesmen resemble people in Enterprising occupations most of all, that they resemble people in Social occupations somewhat less and people in Conventional occupations still less. In this way, the code provides a brief summary of what an occupation is like by showing it's degree of resemblance to three occupational groups.

Outcomes and Recommendations

The first step in exploring "The Self Directed Search" was to have a group of junior high teachers and counselors read the inventory and make recommendations for changes. Their first suggestion was to simplify the directions and some of the vocabulary words, so that they would be understandable to junior high students. Secondly, they recommended eliminating the students' mathematical computation section and to program the computer to compute the job code. Thirdly, they recommended including a section in which students could indicate their best liked interest area and educational level explored in the CAST program. This job classification system is taken from the book The Psychology of Occupations(Roe 1956)

The above changes were made and the revised "Search", now called Computer Assisted Occupational Search (CAOS) - (See Appendix D) was piloted with a group of 8th grade students. During the pilot, the students had problems in the following areas:

1. Understanding the format of the pages.
2. Understanding the directions in the Self Estimate section.
3. Understanding some of the activity and job title terms.

As a result of the pilot, Mr. Stuart Packard, Assistant Director, Field Services, initiated the following changes in the CAOS Inventory:

1. The format was simplified by having students indicate only positive responses to a question. Having two response boxes for negative and positive answers confused the students.
2. The directions in the Self Estimate section were clarified, so that the students would understand that they were evaluating themselves in relationship to particular job skills.
3. The Self Estimate scale was changed from seven points to five points plus zero. Thus, the scale was kept consistent with the five point scales used throughout CAST.
4. The activities and job titles were clarified using synonymous terms.
5. Some examples were changed to reflect female as well as male interests and to represent a broader range of activities and competencies which could be included in any of the six occupational categories.

6. In addition, the computer output was changed so that it:

A) printed out the students job code and all the jobs (with educational level) fitting under that category, (Example: ECS - Enterprising, Conventional, Social)

B) changed the job code to provide two other combinations of the same code (CSE) (SEC) and printed out a different set of jobs fitting under each different code combination, and

C) printed out all jobs falling under the interest area and educational level preferred by the students.

7. To use CAOS, the reader should first contact Dr. John Black at Consulting Psychology Press, 577 College Avenue, Palo Alto, California 94306.

Pilot

With these final revisions, CAOS and the non-computerized version, "The Self Directed Search", were piloted with two groups of 25 nineth grade students, who had been through the CAST program. Both teachers read the instructions to the students, gave the students as much time as they needed and answered all their questions.

The group using CAOS completed the survey in a half hour and had no questions concerning directions or vocabulary. The other group took two hours to complete the survey and encountered numerous problems with the directions and the vocabulary. The teachers observed that the math computations in the manual version took the longest and were the most confusing for the students. In the computerized version the math computations were handled by the computer.

The students using the manual version had to look up and write down their own jobs while the students using the computerized version received not only a printout of jobs related to their job code but also received a "CAST" classification of the job titles as they related to their highest interest area and educational level. Although the students using the computerized CAOS had to wait a day for their printout list of jobs the computerized sheet served as a motivating factor and a concrete example of jobs they should be exploring.

Conclusions

From the various evaluations of the computerized "Self Directed Search", the following conclusions were drawn:

1. The students can complete the inventory in 1/4th of the time it takes to complete the manual version.
2. The printout has the jobs grouped using the same classification system as the CAST program.
3. Students are exposed to twice as many jobs as they would be on their own.
4. Computerized CAOS serves as a unique expanding tool and motivating tool.
5. Students can relate their values which they indicated by their CAOS responses to their values identified in the CAST program.
6. Students can access many written career sources through the DOT* number provided in CAOS printout.
7. Students can take their printout home and discuss it with their parents.
8. Students learn about job titles with which they are not familiar.
9. Students explore themselves as they answer the questions.
10. Students learn about each others interests.

Here are a few suggestions for the use of CAOS with or without the CAST program.

Without the CAST program

1) Introductory device for a career education program.
2) Used with a unit on values.
3) Used to begin a class discussion on jobs.
4) Used to access other career information.

With the CAST program

1) Used to expand jobs.
2) Used to reference information sources using the DOT classification number.

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*Dictionary of Occupational Titles 1965

3) Used to expand values.
4) Used to compare internship decision with original printout list.
5) Used before and after CAST and comparison made.
6) Expand awareness of interest based on the job code categories.

These are only a few ways in which CAOS can be used with or without the CAST program. It is a valuable exploration and expanding tool and is highly recommended for use in the program.

PROGRAM EVALUATION

This section includes all of the formative and summative data collected, analyzed and interpreted in this project. It specifically addresses the following:

1. Introduction to the Research Report
2. Evaluation of the Objectives
3. Other Information gathered relating to the objectives
4. Outcomes and Recommendations

Introduction

Description of Report

The following report is not an evaluation report in the normal sense. The Pontiac Research and Development department did not serve as the formal evaluators of this project. Their primary function was that of consultants and data analyzers. This consisted of pre/post analyses, teacher and student reliability checks and correlations studies between the subgroups. A description of the role of the external evaluator is described in Appendix F.

The analysis procedures described in this report were decided and agreed upon by the external evaluator and the Pontiac Research and Development staff along with the Project Director.

The Project Director, Judy Battenschlag, was the primary determiner of the evaluation design and also did the data collection. Instruments were supplied by the consultant firm or were authored by the project director. The only exception is the curriculum/project evaluation form, which was supplied by the Pontiac Research and Development department.

For detailed description of the instruments and scoring procedures, refer to the body of the project report.

The report format is divided into three parts.

Evaluation of Objectives

1. Objective 1 - Student Data
2. Objective 2 - Teacher Data
3. Objective 3 - 1972-73 Trainees
4. Objective 4 - Training Data
5. Objective 5 - AIDS
6. Objective 6 - GAOS

Other Information

7. Curriculum Evaluation
8. Attitude Data
9. Scoring and Scorer Reliability Procedures
10. PALS Evaluation
11. Other Questions

Summary

Sections 1-6 pertain to data which describe the outcomes of CAST objectives 1-6. Since the curriculum was a major outcome of the project, an attempt was made to assess its useability and compare it to other curricula that the participants have used previously. The results are reported in Section 7. Section 8 is comprised of data collected to assess attitudes of parents, teachers and students toward involvement in CAST.

Many of the instruments used to assess the levels of functioning of students and teachers in CAST were newly developed. Therefore, reliability measures were unavailable. The Pontiac R and D department devised means to determine instrumental and scorer reliability. The results of these checks are found in Section 9.

Pontiac Adult-Student Learning Systems, while not funded by CAST, was an extension of the original program into the high school. The director and the two instructional leaders were participants in the original CAST in-service and served as trainers for the second in-service. Because of the close involvement with CAST, a copy of the PALS report is included in Section 10.

Several questions were addressed, which were not part of, but were felt to be related to, the initial stated objectives. Outcomes of the research done on these issues is addressed in Section 11. Finally, the Outcomes and Recommendations Section concludes the PROGRAM EVALUATION SECTION.

Evaluation of Objectives

Objective One - Student Data

OBJECTIVE ONE - One hundred twenty-five elementary, 700 Junior High and 200 High School students will demonstrate knowledge of career achievement skills necessary for career placement during the 1973-74 school year.

Students Selected

Elementary - Experimental

Only two first grade classes were involved in the elementary portion of the project because: 1) the other selected elementary teachers were unable to participate in the summer training sessions, and 2) the elementary teachers involved last year were unable to schedule the CAST program because of major curriculum changes in their schools.

Elementary - Control

No control group was used because of the technical nature of the CAST skills.

Junior High - Experimental

All but one of the CAST teachers selected one of their classes at random to receive CAST instruction. The other teacher was a ninth grade instructor who had been in the program last year and taught CAST as a 10-week mini-course to students who elected it.

Junior High - Control

One control group was selected at random from one seventh, one eighth and one ninth grade school.

High School - Experimental

There were a small number of high school personnel interested in applying for the CAST project. Only two high school teachers were initially selected to be involved in the project. Of the two selected, one moved out of the district. Thus, only one class was involved at the high school level.

Although the intention was to expand the CAST project into the high school this year, a new project called PALS (Pontiac Adult-Student Learning System) was funded for the purpose of extending the career skills, the interpersonal communication skills and the internship experience into the high school. The results of this extension of the CAST project can be found in the Pontiac Adult-Student Learning System Interim Report. (June 1974)

High School - Control

No control group was used at the high school because of the small number of students.

Instruments

Module Testing - Scoring Criteria

Nine modular test questions were written to cover a given number of CAST performance objectives. (See Appendix G) Each question was scored on a five-point scale with level three being defined as mastery level. See the following page for scoring description.

Scoring Procedure

Each teacher administered the module test after completing the performance objectives within that module. After giving the test, each teacher scored his/her own tests according to the described scoring criteria. (Each teacher had been trained to score on sample tests.) A modular test record was kept by each student as well as the teacher.

Each teacher followed this testing procedure until time ran short. First the one high school class was finished at the end of the first semester. The teacher had to stop the modular testing in order to come close to finishing the program in a semester's time. Another teacher at the junior high ran into the same problem in trying to deliver the program in a semester.

The major problem for teachers was scheduling enough time to deliver all the CAST objectives, administer the modular tests which took one class period, and teach their regular course content. Because the tests paralleled so closely the daily performance objectives, it was decided to create a final summary test question which would cover the entire course and thus cut down on the time needed for modular testing.

Summary Question - Description

The final summary question asked students to describe and give examples of the steps they would take in developing a career plan. (See Appendix H) The intent was to have students apply the skills they had learned in developing a sequential career plan.

Due to program revision and time constraints goals 5 (choosing a limited set of occupations to explore), 11 (identifying specific skills through personal interview), 12 (evaluating oneself in relation to the job requirements), 14 (investigating principles that relate performance to goals to human benefit), and 17 (investigating job with regard to promotional possibilities) were not addressed to the degree that they were testable. Goals 15 (reevaluating job with regard to new information) and 16 (reevaluating occupation with regard to change of values) while included in the evaluation were not addressed equally by all teachers.

Scoring Criteria

Each skill area evaluated included one or more of the CAST curriculum goals. (See Appendix I for CAST Curriculum Goals and Summary Question Scoring Matrix)

Each skill area is evaluated on a five-point scale with the general discrimination given at the bottom of the scoring matrix. If students didn't answer, an implied answer, or showed a model or scheme used to answer the question they would get a 2. If they gave at least two explicit examples, they got a 3 which is mastery. If they gave examples and showed a scheme or system in answering the question, they would get a 4. If they had all the steps in order they would receive a 5.

Scoring Procedure

The tests were administered in two one-hour blocks by the CAST teacher and in one-hour blocks by the control teacher. The control students were finished way before the hour was over.

These tests were then scored by six of the CAST trainers after being trained by the Project Director to use the scoring criteria. Each trainer would score four tests from one teacher and then would score four from another, etc. Thus, each trainer had a chance to score tests from all experimental and control groups.

Elementary Testing Procedure

At the elementary level each student in the two experimental first grade classes were tested (at the end of the year) individually on the test questions listed on the chart on the following page. If the student answered the question correctly, a check was given. If the student missed the question, no mark was given. This chart indicates the percent of children answering the questions correctly as compared to the rest of the children in that class. Then the scores for both classes were combined and the total percentage calculated.

CAREER ACHIEVEMENT SKILLS TRAINING TEST

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	QUESTIONS	CLASS I	CLASS II	TOTAL
EXPANDING	1. What do people do? (action word)	$\frac{27}{27}$ = 100%	$\frac{25}{25}$ = 100%	100% = $\frac{52}{52}$
	2. Who ____________?	$\frac{21}{27}$ = 77.7%	$\frac{25}{25}$ = 100%	88.4% = $\frac{46}{52}$
	3. Pick a People job.	$\frac{19}{27}$ = 68.2%	$\frac{21}{25}$ = 84%	76.9% = $\frac{40}{52}$
	4. Pick a Thing job.	$\frac{22}{27}$ = 82.2%	$\frac{20}{25}$ = 80%	80.7% = $\frac{42}{52}$
	5. Using one of the above jobs, tell if its Indoors or Outdoors.	$\frac{27}{27}$ =100%	$\frac{24}{25}$ = 96%	98.7% = $\frac{51}{52}$
	6. Name two people you can get information from.	$\frac{24}{27}$ =89.6%	$\frac{21}{25}$ = 84%	86.5% = $\frac{45}{52}$
	7. Name two things you can get information from.	$\frac{7}{27}$ = 25.9%	$\frac{21}{25}$ = 84%	53.8% = $\frac{28}{52}$
	8. Tell me two question words (that we ask to get information).	$\frac{14}{27}$ = 51.8%	$\frac{21}{25}$ = 84%	67.3% = $\frac{35}{52}$
	9. Can you name more? (Indicate number of words given.)	$\frac{13}{27}$ = 48.2%	$\frac{11}{25}$ = 44%	46.0% = $\frac{24}{52}$
	Tell me the steps in a program for blowing bubbles with bubble gum.			
PREPARING	10. First Step	$\frac{21}{27}$ = 77.7%	$\frac{21}{25}$ = 84%	80.7% = $\frac{42}{52}$
	11. Middle Step	$\frac{27}{27}$ = 100%	$\frac{22}{25}$ = 88%	94.2% = $\frac{49}{52}$
	12. Last Step	$\frac{25}{27}$ = 92.6%	$\frac{21}{25}$ = 84%	88.4% = $\frac{46}{52}$
	Ask - What is your goal? What do you want to do? Mark last step. Ask what is easiest step. What is middle step?			

Elementary

Discussion of Data

Although Classes I and II were very close in their achievement, on questions 7-8 regarding "thing information" sources and question words, Class I did not perform as well as Class II. In talking to the teacher it was found that as much time was spent on instruction in these areas as did the other teacher.

Both classes scored highest on the expanding questions 1, 2, 5 and 6. Expanding or generating job titles seems to be easier for students than classifying jobs in people and thing categories which is a higher order cognitive process.

In regards to question 5, students seem to be able to discriminate easier between an indoor and outdoor job as opposed to a people and thing job. Perhaps the discriminations given by the teachers were more definitive for indoor and outdoor as opposed to people and things.

The scoring was higher on question 6, generating people sources, as opposed to question 7, generating thing sources. One explanation is that more time was spent exploring people sources than thing sources because of the reading level and interest areas of the children.

On the program development questions 10, 11, 12 the children did extremely well. The children seemed to find it easy to look at a behavior and break it down into smaller behavioral steps and sequence them so as to reach the goal or objective. This skill is the basis for preparing or planning career programs or sequencing behavior to reach goals of varying complexity.

Conclusion

As can be seen from this data, elementary children can learn career achievement skills simplified for their readiness level. In cases where they scored low they either lacked experience, exposure or practice.

Only the expanding and preparing skills were measured because they were the only skills emphasized at this age level. Perhaps in the future the decision making skills could be looked at and simplified for their level.

Junior High

Discussion of Data

1. Module Testing - These tests were designed to be administered at the completion of each curriculum module. In most cases it consisted of an observational checklist which the teacher checked to see if the students were able to complete the objective. Scoring procedures were predetermined and involved a 5-point scale ranging from 1 to 5 (low to high) with a value of 3 being acceptable.

   Due to clerical and bookkeeping problems, it became a burden for the teachers to maintain the data collection procedures at the end of each module. Of the first 12 modules, 55% of the data was turned in. Of the total 20 modules, 32% of the data was available for analysis.

   With this amount of missing data, it is not good practice to attempt to generalize to the population. Therefore, the only reporting is of the first 12 modules and the percent of students receiving a score of 3 or above in each class.

MODULE

(Percent of Students Receiving Acceptable Scores)

Teacher	1	2	3	4	5	6	7	8	9	10	11	12
1	46%	46%	20%	38%	40%	28%	23%	50%	16%	16%	33%	27%
2	48	46	37	29	25	35	--	--	--	--	--	--
3	33	38	29	31	7	--	--	--	--	--	--	--
4	26	42	22	17	0	--	--	--	--	--	--	--
5	36	79	39	80	55	68	67	59	54	50	55	79
6	61	21	9	44	38	--	--	52	64	59	--	--
7	38	29	32	32	47	9	47	--	--	--	--	--

2. Final Testing - A total of ten teachers administered a post test, three of whom were control teachers (see Table A).

Table B, is a comparison, by objective, of experimental to control in terms of percent of students achieving an acceptable performance, i.e., level three on a five-point scale.

Table C is a comparison of experimental to control in terms of the major curriculum components of CAST.

Both Table B and C clearly illustrate that the experimental groups did out-perform the control groups. However, an interesting result is the relatively high performance of the control group on skill area 8, which tested the learner's ability to write a step-by-step program to reach a goal.

TABLE A

Experimental

Skill Area	Total	%	1	2	3	4	5	6	7
1	211/25	89	15/1	24/0	19/3	21/1	24/2	84/16	24/2
2	152/74	64	15/1	19/5	15/7	18/4	11/15	60/40	24/2
3	123/111	52	13/3	11/13	1/19	16/6	4/20	55/45	21/5
4	202/34	85	15/1	22/2	19/3	17/5	23/3	85/15	21/5
5	193/79	82	14/2	20/4	18/4	16/6	23/3	83/17	19/7
6	169/67	71	9/7	22/2	18/4	8/14	22/4	77/23	13/13
7	169/65	71	15/1	13/9	12/10	14/8	20/6	75/25	20/6
8	125/110	53	12/4	0/24	0/22	7/15	17/9	73/27	17/9
9	16/220	7	6/10	0/24	0/22	2/20	0/26	0/100	8/18

Control

Skill Area	Total	%	1	2	3
1	11/55	16	6/17	4/16	1/22
2	5/61	7	1/22	3/17	1/22
3	4/52	7	2/21	1/19	1/23
4	5/61	7	1/22	4/16	0/23
5	1/65	1	0/23	1/19	0/23
6	2/54	3	2/21	0/20	0/23
7	0/66	0	0/23	0/20	0/23
8	14/33	38	6/17	8/12	19/4
9	0/66	0	0/23	0/20	0/23

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TABLE B

PERCENT ACCOMPLISHED ACCEPTABLE PERFORMANCE

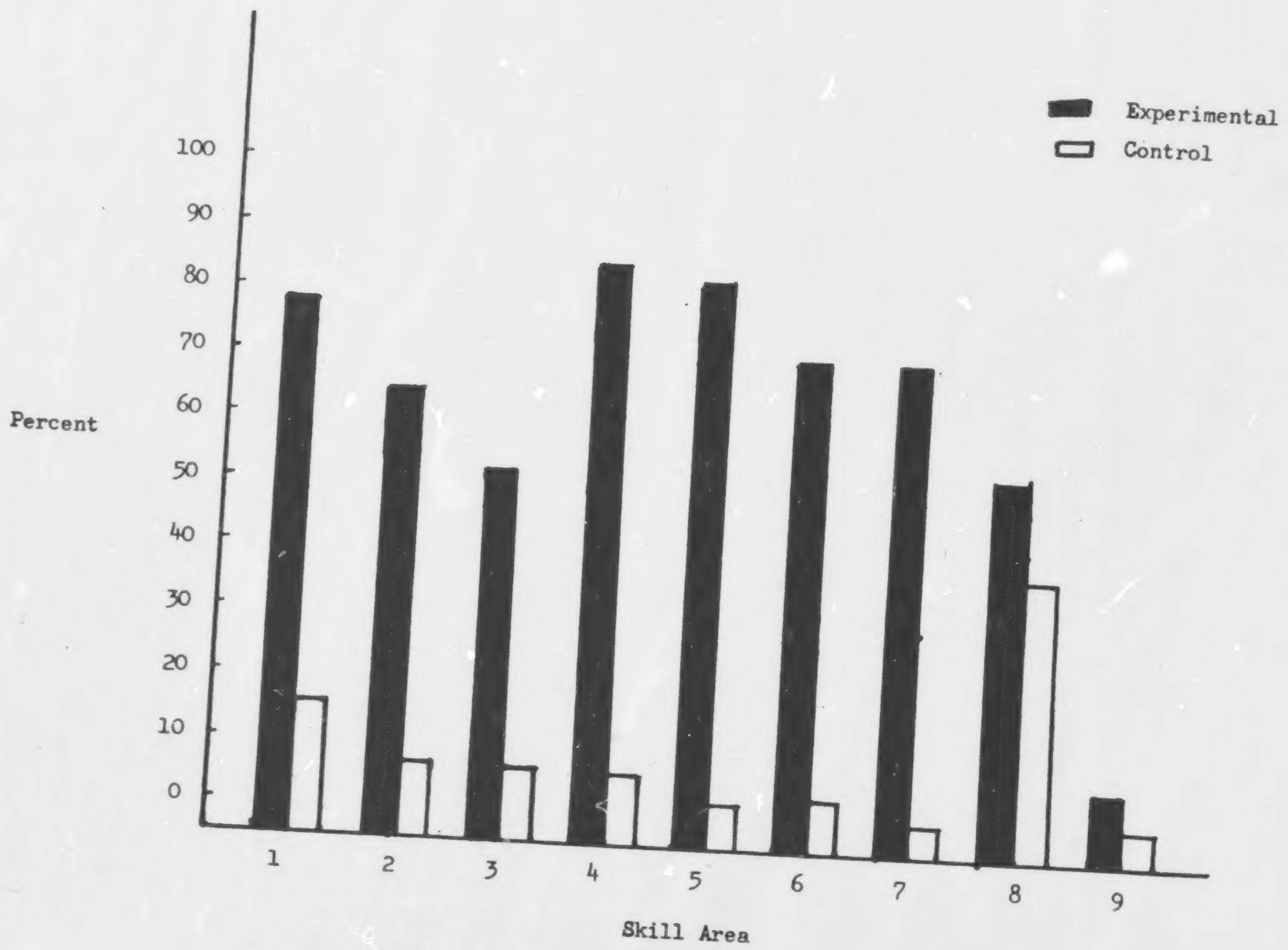

TABLE C

MAJOR CAST COMPONENTS

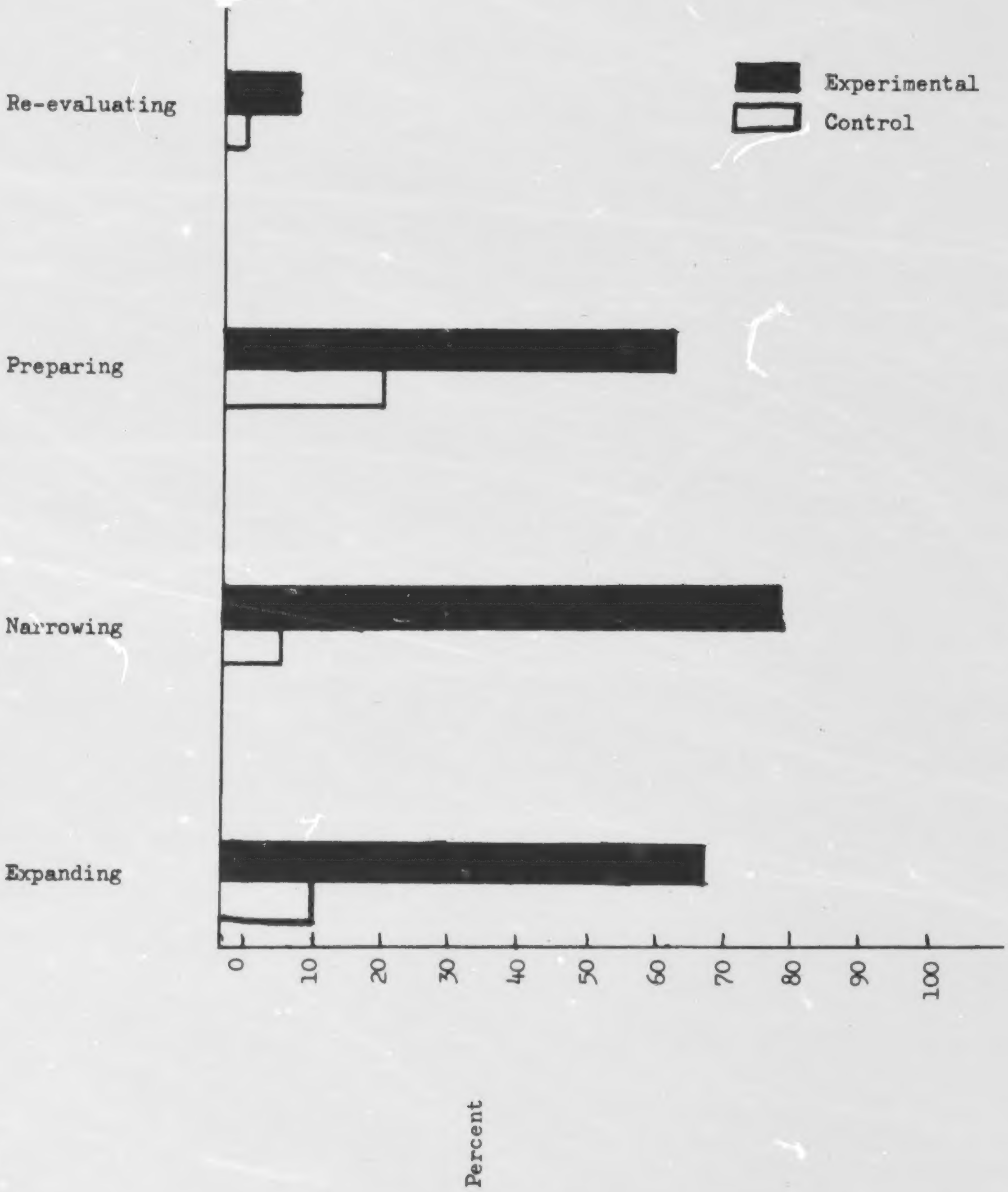

TABLE D

STUDENT PERFORMANCE PROFILE

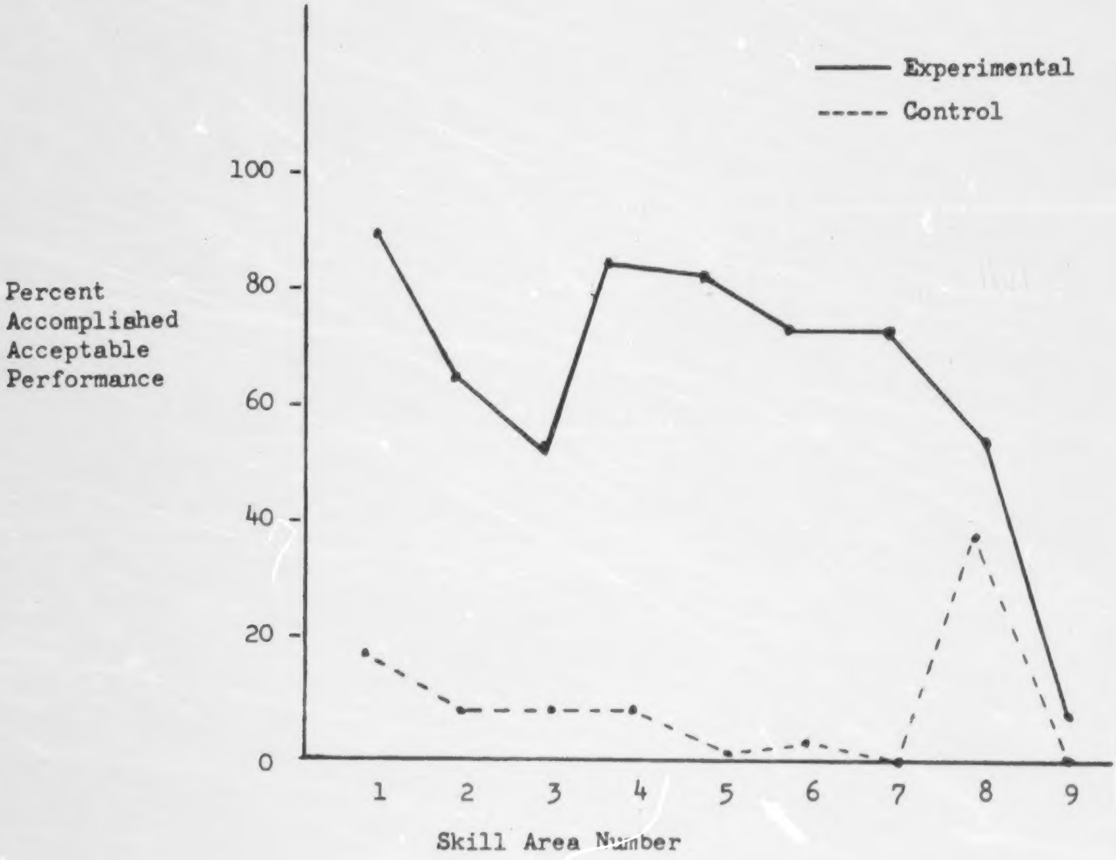

Table D is a profile of student performance and illustrates the general tendency of both the experimental and control groups to decline on the items which covered the material delivered toward the end of the CAST program (with the exception of skill area 8, control). Perhaps this decline was due to the increasing difficulty of the objectives or to the closeness of the later objectives to the end of the delivery time period; or, perhaps the decline is due to a combination of these and other factors such as unequal treatment of skill area 9 by all teachers.

TABLE E

COMPARISON OF TOTAL PERFORMANCE

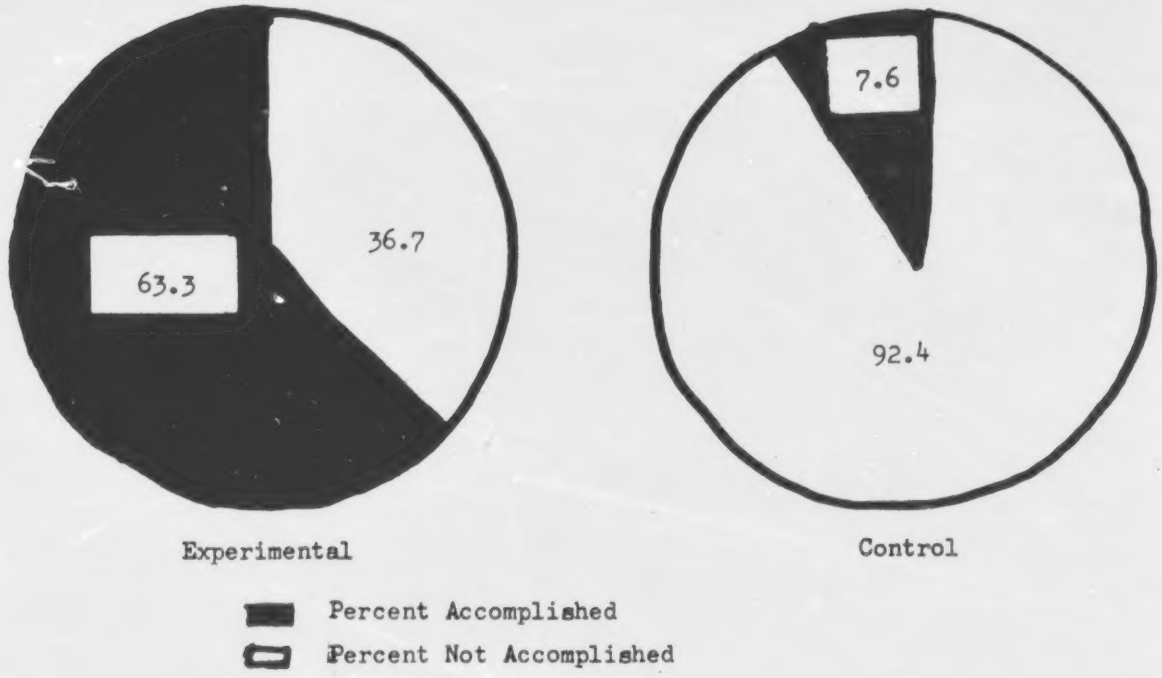

Table E represents a comparison of the performances of experimental and control students on the total CAST program.

Conclusion

As can be seen from examining the previous charts and graphs, there is an obvious difference between the experimental and the non-treated control group. Students did learn career skills as a result of instruction by CAST trained teachers. On overall performance, 64% or about 2/3 of the objectives were achieved at an acceptable level.

Objective Two - Teacher Data

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Objective Two - **The 1973-74 trainees will demonstrate knowledge of interpersonal skills, educational skills andcareer skills necessary to deliver the CAST program during the 1973-74 school year.**

Teacher Selection Inventory

Administration

The Human, Educational and Career Inventories were given as selection devices before the August training and then again at the end of the program in May. The trainers "pre" inventories were those given for their initial selection in 1972. They also took the post inventory in May. All participants had unlimited time to take the inventories.

Human - Description

A Human Resource Development Inventory (see Appendix J) developed by Carkhuff Associates to measure Human (Interpersonal) and Educational Skills was used as one criterion in selecting teachers and counselors for participation in the CAST program. The inventory has two parts. The first part deals with the two basic human achievement skills defined by Carkhuff as communication (inter-action skills) and discrimination skills (perceiving likes and differences).

The communication items consisted of a stimulus expression in the form of a short academic or personal problem as stated by a student to which the "trainee", the teacher or counselor must respond by writing their most helpful response as if they were talking to the student. These responses are then assessed as to their level of effectiveness on a scale from one-five. One is the least effective and five is the most effective response in communicating to a person.

In regard to the discrimination items, the trainees were presented with a student stimulus expression of an academic or personal problem and were then presented with five possible responses. They were then to rate these responses in terms of their effectiveness on the same one-five scale as mentioned above. Both five-point scales can be found in The Art of Teaching, by Dr. Robert R. Carkhuff, Dr. David H. Berenson and Dr. Richard M. Pierce.

Educational - Description

The educational part of the inventory (see Appendix K) asked for a free response to the statement, "Develop a lesson plan you would deliver tomorrow." The response was assessed on the critical skill dimensions of teaching preparation and delivery as described by Dr. Robert Carkhuff and Dr. David Berenson in their book, The Art of Teaching. These skill dimensions are - objective-evaluation, curriculum development, teaching methods, classroom management and ROPES (review, observe, prepare, exercise, summarize). These skill dimensions are also rated on a one-five scale of effectiveness which can be found in the book previously mentioned, The Art of Teaching. (Carkhuff, Berenson, Pierce 1974)

Educational - Scoring Criteria

Each teacher was rated on a 5-point scale in each of the areas listed on the next page. Frequencies were tallied and a mean score was calculated for the curriculum development, teaching methodology and classroom management areas. The objective-evaluation and ROPES areas were given only one rating because only one rating for each area was appropriate.

Career

Same as student modular testing for pre-test. Same as student final summary question for past test.

Observational Checklist

Description

The observational checklist (see Appendix A) was used to observe the teachers on the skills which they had learned during the summer training. The observations were recorded in the time frame of Review, Overview, Preview, Exercise, Summary (ROPES - see "Training Component" under PROGRAM DESCRIPTION SECTION for a description of ROPES) Each teacher was observed and her behavior recorded on a 5-point scale. The checklist was used as a way of describing teacher behavior. In using this checklist, we were making the assumption that these skills make up effective teaching - teaching that results in student growth. What we were saying is that effective teachers:

1) use a greater quality and quantity of methods,
2) actively involve the students in the learning process,
3) teach the students skills and a way to evaluate whether or not they are doing the skill right,
4) help students to explore, understand and act on their understanding,
5) attend to students,
6) respond to students expressed ideas and feelings, and
7) differentially reinforce student behavior in relationship to student behaviorial goals.

For a more detailed description of these skills, read The Art of Teaching, (Carkhuff, Berenson, Pierce 1974)

Although we had originally intended to use the observational check list as a means of evaluating teacher performance on educational delivery skills, difficulty in standardizing the instrument prevented the accumulation of reliable data for evaluation purposes. Because we continued to change and improve the check list it was useful in helping the trainers improve their discrimination in increasing the quality of feedback to teachers for improvement in their delivery. Because the instrument was in the process of development it was limited in its use as an ongoing evaluation tool from an observational standpoint. However, it was extremely effective as an assessment tool for teacher feedback and growth.

Scoring Criteria

The five-point scale used to observe each skill area ranged from 1 - least effective to 5 - most effective in terms of overall student learning. At this time we are still in the process of describing what is the optimal teacher modal and mean rating in each area. We were attempting to describe teacher "profiles" and look at them in terms of student outcomes.

Scoring Procedure

Each trainer observed their trainees throughout the year. During the last three weeks of the program, the trainers observed, rated and taped the trainees for the final evaluation. Each teacher input was recorded in the appropriate box for the appropriate skill. Then a modal and mean score was calculated for each skill area.

Discussion of Data

The teachers were administered the consultant supplied paper/pencil tests at the beginning of the program to measure skill level in interpersonal and educational skills. A description of the instruments is included in the body of this report.

	Interpersonal Skills		Educational Skills	
	x	s.d.	x	s.d.
Pre	16	6.02	83.9	22.3
Post	41.2	3.12	166	40.6

For the data on interpersonal skills, the difference between pre and post yields a dependent t of 19.83 indicating a significant increase in performance at the .001 level.

The correlation between pre and post was r = .43, with a dependent t of 7.11 indicating a significant growth at the .001 level.

Although data on career skills is available, the pre data was collected using a different instrument. Therefore, the only comparison data is with student performance and that is discussed later in this report. Based on a possible score of 45, the mean performance of the teachers was 37.33 with a s.d. of 7.76.

Conclusion

The assumption can safely be made that the trainees did acquire those skills which were necessary to the delivery of the CAST program.

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Objective Three - 1972-73 Trainees

OBJECTIVE THREE - The 1972-73 trainees will demonstrate knowledge of educational skills used for delivery of the model lesson plan to students during the school year.

It was not possible to deliver on this objective because the teachers and counselors could not be released to deliver the model lesson plans.

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Objective Four - Training Data

OBJECTIVE FOUR - Three elementary counselors, one junior high teacher, two senior high counselors and two administrators will conduct training and follow-up sessions in interpersonal skills, educational skills and career skills to new CAST participants during the summer and the 1973-74 school year.

The above personnel were trainees in Phase II of the CAST program. As a result of their performance and their availability they became trainers in Phase III. A discussion of training methods used and the frequency of training can be found in the "People and Training Component" under the PROGRAM DESCRIPTION SECTION.

Discussion of Data

One means of attempting to determine the achievement of Objective 4 is to compare the pre/post scores on the interpersonal and educational skills tests as a function of growth. If the trainers described in the objective did deliver the training, and if the post test scores were significantly higher than the pre-test scores, then the skills were acquired by the trainees as a result of trainer effort. The data reported in discussion of Objective 2 supports this assumption. Although the mean scores increased in both interpersonal skill (Inc. - 25.2) and educational skills (Inc. 82.1), there appears to be a difference in the distribution of scores. The decrease in s.d. (6.02 to 3.12) between pre/post on interpersonal skills as measured by the evaluation instrument, indicates a decrease of variation in performance by the trainers. The increase in s.d. (22.3 to 40.6) on the educational skills indicates an increase in the variation of performance on the evaluation instrument revealing differential learning on the part of the trainees. Therefore, while interpersonal skills were learned equally well, educational skills were not learned equally well. If the learning is a function of the delivery, it appears that while all skills were delivered, some were delivered more adequately than others.

In order to determine whether or not this objective had been met from the teacher's view point, a questionnaire was developed and distributed to the 1972-73 participants. Nine participants returned surveys. Participants were asked to respond to questions about each of the skills delivered in terms of each of the training modes, i.e., summer training (question 1), monthly meetings (question 2) and conferences as a result of classroom observation (question 3).

Question 4 was asked in an attempt to identify skills which teachers felt were never delivered adequately. Question 5 was designed to identify skills which may have been needed which were not provided.

There was also a question concerning the usefulness of the skills to the teacher as they might relate to other than the delivery of CAST. Questions 7, 8, and 9 were designed to determine this issue.

Questions 10, 11, 12 and 13 were designed to determine how the trainee evaluated his own skill level and his need for further training.

Although physical skills were delivered in the training, they were not included in the objective. Therefore, the results are not reported here.

To summarize the data as it relates to the original question, 33% or less of the teachers felt that they were not adequately prepared by the training in only two of the thirteen skill areas defined, i.e., program development and learning strategies. All other skills were reported by 100% of the trainees as having been delivered during some training phase at a level which prepared them to deliver the CAST program to their students. No less than 66% of all respondants reported their own skill level to be higher at the end of the summer training than before training on 12 of the 13 skills in question and 66% or more reported an additional skill increase between August and the end of the project. This last report included the two skill areas which were previously reported by some to have been delivered at less than adequate levels. (This increase in skills is substantiated by the data from Objective 2.)

CAST Training Skills Evaluation Check List

Yes/No for each skill (not 1-5 scoring)

1. This skill was delivered adequately in the summer training.
2. This skill was delivered adequately in the Wayne State Class.
3. As a result of the observation, the trainers assisted me in improving this skill.
4. This skill was never delivered adequately.
5. I needed to have more training in this skill in order to deliver CAST effectively.
6. I was able to use this skill in my career delivery.
7. I was able to use this skill in my regular delivery.
8. I have been able to use the skill for my own personal growth.
9. I have been able to teach someone else (other than my students) this skill.
10. I feel that I could teach someone else this skill.
11. I would like additional training on this skill.
12. My level of functioning on this skill was higher *after* the August training than *before* the August training.
13. My level of functioning on this skill is higher *now* than it was *after* the August training.

CAST SKILLS TRAINING ASSESSMENT

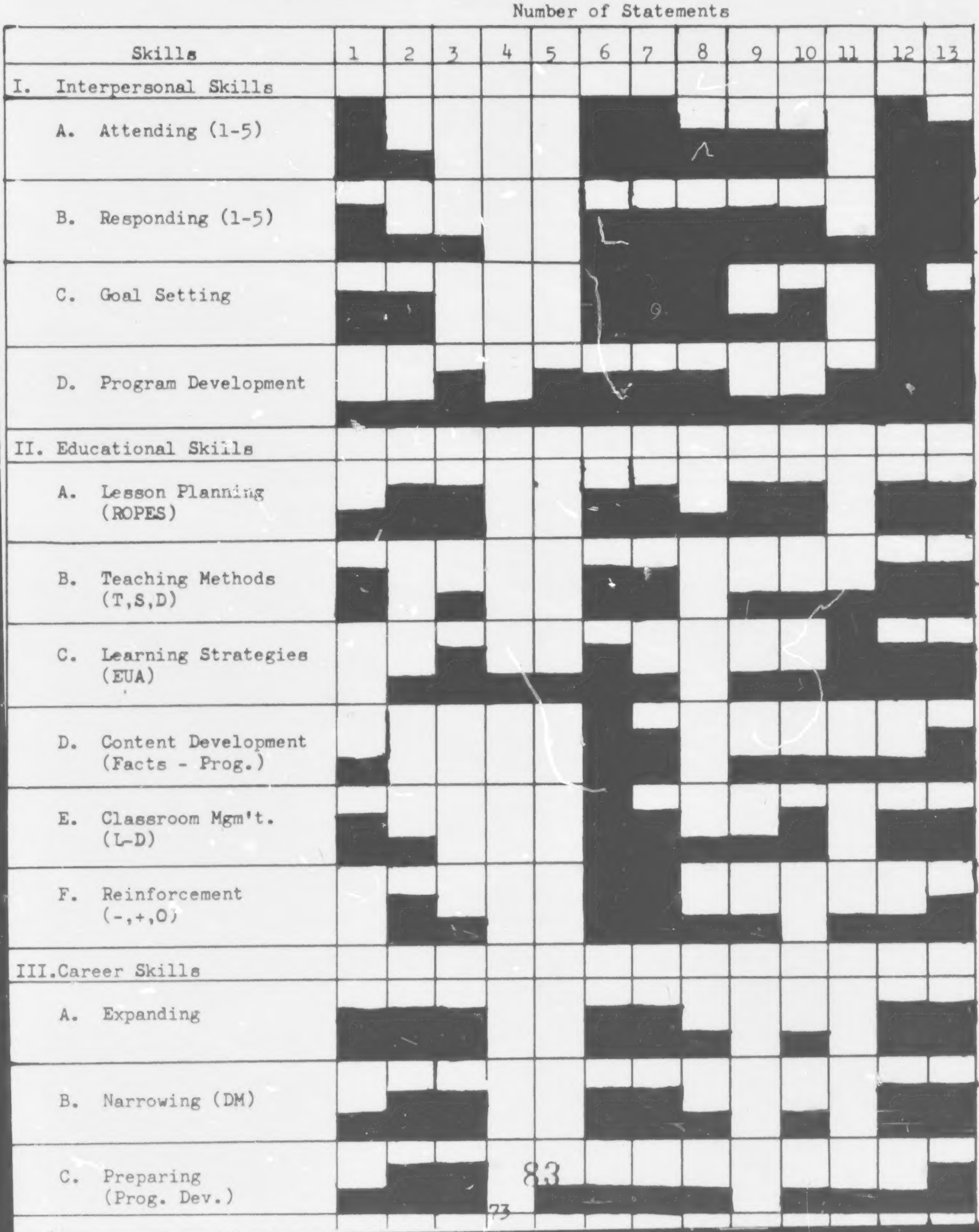
■ 100% responded yes

▆ 66% - 99% responded yes

▃ 33% - 65% responded yes

□ 0% - 32% responded yes

Training Skills Evaluation Checklist



An attempt was made to determine to what degree that the level of functioning of the trainer affected performance of the trainee. First, the data used for this attempt was the post-test data on interpersonal skills. The mean of the trainees was 41.1 with a s.d. of 3.1. The trainers had a corresponding set of data, 41.9 and 1.3. The correlation between the two sets of scores was 0.09, N = 10. The variances produced by this instrument were so small that meaningful correlations are difficult to obtain. All that can honestly be derived from this data is the observation that, after training, the trainees and trainers are more alike than they were before training and that the trainers (s.d. 1.3) are more alike than are the trainees (s.d. 3.1).

The educational data revealed a similar finding.

	$\bar{x}$	s.d.
trainees	164	38.3
trainers	199	8.5

The correlation (r) = -0.20

The low variance makes statistically significant correlations difficult if not impossible to obtain. Before the question of trainer/trainee relationship can be adequately addressed, more complete instrumentation must be developed and used systematically over a pre-determined time period.

Conclusion

The trainers did deliver interpersonal, educational and career skills to the trainees.

Objective Five - AIDS

> Objective Five - The computer will be used to analyze career achievement skills test results during the 1973-74 school year.

AIDS was used only during Phase II of the project. The reason it was not used in Phase III was that the modular and CAST Summary Questions were so designed as to not require computer scoring. (For a description of AIDS see Appendix M)

AIDS is not included in the Technical Report because it was not developed as part of the CAST project. It was simply adapted for use in CAST.

Objective 6 - CAOS

Objective Six - **Secondary CAST students during the 1973-74 school year will use a Computer Assisted Occupational Search System based on Dr..John Holland's "Self-Directed Search".**

For a discussion of the development and piloting of CAOS see "Computer Component" under the **PROGRAM DESCRIPTION** SECTION.

See Appendix D for sample CAOS student form, Appendix N for a description of CAOS student printout and Appendix O for CAOS System Documentation.

Other Information

Curriculum Evaluation

The CAST curriculum is based on the Carkhuff model of Exploring Understanding and Action. The curriculum goals and objectives were written during Phase II and were revised and formalized during Phase III. The curriculum was put in the form of a Phase II Lesson Plan Manual during the summer of 1973 and used by the Phase III trainees. The data contained here refers to the evaluation of the Phase II Lesson Plan Manual. (See Appendix B)

March 8, 1974
CAST

CURRICULUM QUESTIONNAIRE - TEACHER FORM

General Directions

The curriculum you have just taught is part of the career education program being developed in your school district. A major goal of the program is to produce a curriculum that is relevant and interesting to students, and is viewed as beneficial and operational by teachers. With this goal in mind, it would be appreciated if you will spend approximately twenty-five minutes or so to complete this questionnaire. Your responses will be helpful in improving both the content and use of this curriculum unit.

In general, the questions contained in this form require that you circle a letter corresponding to your response.

The purpose of this questionnaire, is not to evaluate you or your students; rather, it is to evaluate the quality of this career educational curriculum unit. As a result, do not respond to any item about which you feel reluctant. After you have finished the questionnaire, return the booklet to me at Irving School.

Thank you for your cooperation.

Alfred L. Pavlish
Evaluator, Research and Development

CURRICULUM QUESTIONNAIRE - TEACHER FORM

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Teacher ____

School ______________________________ Grade ____________________

PART I BACKGROUND INFORMATION

The following set of items will be used to describe the total group of teachers who taught this curriculum. Circle the letter corresponding to your response.

1. What is your sex?

   a) Female b) Male

2. How many years have you been teaching?

   a) Less than 1 year
   b) 1 - 2 years
   c) 3 - 5 years
   d) 6 - 10 years
   e) 11 - 15 years
   f) More than 15 years

3. What is your highest level of education?

   a) Some college
   b) Bachelor's Degree
   c) Master's Degree
   d) Doctor's Degree
   e) Other (Please Specify) ______________

PART II LESSON PLAN BOOK

The following items relate to various parts of the Lesson Plan Book you used when teaching this curriculum. Circle the letter corresponding to your response.

Curriculum Goals and Performance Objectives

4. In general, did the Curriculum Goals help you understand the intent of this unit?

   a) Yes b) Somewhat c) No

5. Did you find the Curriculum Goals to be clearly worded?

   a) In most cases
   b) Sometimes
   c) Usually Not
   d) Never

6. Did you feel that the Performance Objectives were closely related to their associated goals?

   a) Yes b) Somewhat c) No

7. How useful were the Performance Objectives in obtaining an overview of this unit?

   a) Very useful b) Somewhat useful c) Not useful

8. Did the Performance Objectives represent behaviors that most of your students would have been able to demonstrate before they were exposed to the curriculum?

a) Yes b) Somewhat c) No

9. Did the Performance Objectives of this curriculum precisely indicate the behaviors your students should exhibit after being exposed to the curriculum ?

a) Yes b) Somewhat c) No

Learning Activities and Associated Materials

10. In general, the learning activities specified: (Circle all that are appropriate)

a) were satisfactory
b) provided an insufficient variety of ways to learn the concepts taught in the unit.
c) required very specific skills (e.g., musical skills, artistic skills) not possessed by most teachers.
d) were boring to most students.

11. Were any unique or innovative teaching strategies suggested to you by the learning activities contained in this curriculum?

a) A great many
b) Many
d) A few
e) None

12. Did any learning activities in this curriculum require an unrealistic length of time to complete when taking into account the educational significance of these activities?

a) Yes (Please indicate which objectives) ____ ____
b) No

13. For what grade level would you judge the concepts and skills of this unit to be most appropriate?

a) 4 - 5
b) 6 - 7
c) 8 - 9
d) 10 - 12

14. Do you feel that the concepts and the skills presented would easily fit into your regular classroom program?

a) Yes b) Somewhat c) No

15. In general, the Evaluation Procedures specified in this curriculum: (Circle all that are appropriate)

a) were not used in my classroom.
b) helped to monitor student progress.
c) helped to reinforce and strangthen student learning.
d) None of the above.

Summary

16. Are the lessons in the Teacher's Guide logically sequenced?

a) Yes b) Not sure c) No

17. Do you feel that any of the lessons in this curriculum contained a flagrant bias (e.g., an economic, ethnic, racial, sexual, or cultural bias) ?

a) Yes (Please indicate the lesson)

____

b) No

18. Please list any skills which you feel do not belong in this program:

____

19. For what grade level would you judge the vocabulary of this curriculum to be most appropriate?

a) A lower grade level than the one specified
b) The specified grade level
c) A higher grade level than the one specified

20. Are there any groups of students for whom you would not recommend this curriculum (e.g., particular ability, reading, ethnic, sexual, cultural, or socio-economic groups)?

a) Yes (Please specify the group(s) ____________________

b) No

21. How would you rate the Teacher's Guide in comparison with the instructional materials traditionally made available to teachers?

a) Better
b) Same
c) Worse

PART III SUPPORT SERVICES AND MATERIALS

The following items relate to the services and materials developed to aid you in teaching this curriculum..Circle the letter corresponding to your response.

Training and Assistance

22. How many hours of in-service training related to this curriculum did you receive before you actually began teaching it?

a) 0
b) 1 - 5
c) 6 - 10
d) 11 - 15
e) 16 or more hours

23. How well did this specialized in-service training prepare you to deliver the curriculum?

a) Very well
b) Well
c) Somewhat
d) Poorly
e) Very Poorly
f) No training received

24. Could you have effectively delivered this curriculum without any specific in-service training? (Circle all that are appropriate)

a) Yes
b) Some of it
c) No
d) No training received

25. While teaching this curriculum, how many times did you request additional in-service assistance in preparing materials for conducting specific learning activities?

a) 0
b) 1
c) 2
d) 3
e) 4
f) More than 4 (Please specify) ________

26. How many times did your trainer provide or arrange for the specific assistance you requested?

a) 0
b) 1
c) 2
d) 3
e) 4
f) More than 4 (Please specify) ________

27. How useful was the comic book in delivering the curriculum?

a) Most use
b) Some use
c) Useful
d) Quite unuseful
e) Most unuseful

28. If you have your choice of using the comic book or not, would you:

a) Use the comic book only
b) Use the lesson plan book only
c) Use the lesson plan book and the comic book

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PART IV CURRICULUM IMPLEMENTATION

The set of items that follows was developed to identify the variety of ways in which this curriculum was taught. Circle the letter of the response that best describes what you did while teaching this curriculum.

29. While teaching this curriculum, approximately how many total hours did you spend in preparation time?

a) 0 to 1
b) 1 to 3
c) 3 to 6
d) 6 to 9
e) 9 to 12
f) More than 12 (Please specify)

____

30. How did you normally organize your class while teaching this curriculum?

a) Large group (total class)
b) Small groups
c) Large and small groups about equally
d) Other organizational procedures (Please specify the procedure)

____

31. While teaching this curriculum, about how many of the lessons did you have to modify extensively? (Circle the most appropriate)

a) None of them
b) About 1/2 of them
c) About 1/2 of them
d) About 3/4 of them
e) Almost all of them

32. While you were teaching this curriculum, did you spend extra time after each lesson reviewing with your class the basic comcepts presented in that lesson?

a) Yes, after every lesson
b) Yes, after most lessons
c) Yes, after a few lessons
d) No

33. If you were to teach this curriculum again, would you change the sequencing of the lessons?

a) Yes, I would make major changes
b) Yes, I would make minor changes
c) No

34. Did you skip any lessons?

a) No
b) Yes (Please indicate the lessons)

_____ _____ _____ _____ _____ _____ _____ _____

35. In general, how did you teach this curriculum?

a) As an intergral part of an existing subject area.
b) As a new, separate topic because the content doesn't fit in our usual curriculum.
c) As a new, separate topic because of the limited time available as a result of field testing.
d) As a new, separate topic because this topic could not be incorporated into the curriculum during this part of the school year.

36. If you taught this unit by integrating it into an existing subject area, in which of the following subject areas did you teach it? (Circle more than one area, if appropriate)

a) I did not integrate this unit into an existing subject area.
b) Art
c) Business and Office Education
d) Foreign Languages
e) Health Education
f) Home Economics
g) Industrial Arts
h) Language Arts/Reading/English
i) Mathematics
j) Music
k) Physical Education
l) Science
m) Social Sciences
n) Special Education
o) Distributive Education
p) Trades and Industry
q) Vocational Agriculture
r) Other (Please specify) ______________________________

37. During how many different school days did you actually teach this curriculum?

a) 1 - 5
b) 6 - 10
c) 11 - 15
d) 15 - 20
e) Over 20 (Please specify) ________

PART V CURRICULUM SUMMARY

The following set of items relates to your general impressions of this curriculum. Circle the letter corresponding to your response.

38. How much did the students in your class learn about the career education and skills contained in this curriculum?

a) Very much
b) Much
c) An average amount
d) Little
e) Very little

39. In comparison with traditional instructional materials, how would you rate this curriculum in terms of student learning?

a) Much better
b) Better
c) Same
d) Worse
e) Much worse

40. In comparison with traditional instructional materials, how would you rate this program in terms of its ability to stimulate the interests of your students?

a) Much better
b) Better
c) Same
d) Worse
e) Much worse

41. Compared to the regular curriculum, how well did this curriculum enhance interaction between you and your class, and the community-at-large?

a) Much better
b) Better
c) Same
d) Worse
e) Much worse

42. How well do you think the content of this curriculum would normally integrate into your regular curriculum?

a) Very well
b) Well
c) Somewhat
d) Poorly
e) Very poorly

43. Overall, how would you rate the quality of this curriculum?

a) Very good
b) Good
c) Average
d) Poor
e) Very poor

44. Would you recommend this curriculum to other teachers?

a) Yes
b) Yes, with reservations
c) No

45. If possible, would you teach this curriculum to your students next year?

a) Yes, with no modifications
b) Yes, with minor modifications Please list ______________________
c) Yes, with major modifications Please list ______________________
d) No

46. Before teaching this curriculum, how did you feel about the desirability and/or feasibility of introducing career education concepts to your students?

a) Very favorable
b) Favorable
c) No opinion
d) Unfavorable
e) Very unfavorable

47. Has teaching this curriculum changed your mind about the desirability and/or feasibility of introducing career education concepts to your students?

a) Much more favorable
b) More favorable
c) No change of opinion
d) Less favorable
e) Much less favorable

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48. In general, did teaching this curriculum cause you to: (Circle all that are appropriate)

a) work with others teachers?
b) become excited about career education?
c) seek more information about career education?
d) increase your knowledge of career education?

TEACHER CURRICULUM QUESTIONNAIRE COMMENTS

(refer to questionnaire)

Question 12

Bulky paperwork. Forms for some objectives could have been provided. (Problem solving pattern forms.)
1 - Listing job titles - seems it could be done more efficiently.

Question 18

All skills are good for J.H. and High School students. Skills circled above (a, b, c, f) are good for elementary.
Elementary - Job requirements relate to interests.
At the 7th grade level - Internship.
At Jr. High level h and i in question 17.

Question 20

Curriculum can be adapted to any group.
Low ability where it correlates with poor readers - unless they can be separately grouped and done at a slower pace.
Modified for self-contained special ed. students.
Low Groups

Question 25 - f

From other teachers involved more than trainers.
6-10 (?)

Question 26 - f

all
Observing and feedback of delivery, clarification of terms, additional resources, contacting role models and assisting in trips, and reviewing curriculum and overview.
always

Question 30

Pairs
Large/small/individual
Some small groups

Question 34 - b

Those relating to interning
I modified heavily. The basic skills were reached except for re-evaluation.

1. P.I.E. job requirements
2. (h) Re-evaluation and i.

All those in interview sequence.
15, 16, 17 - others I don't remember.
The ones too difficult for Grade 1.
Only did those lessons applicable to 1st grade (see elementary curriculum to be completed 6/21/74).
I taught all skills in 5th grade Wisner class. Peggy will indicate which lessons were skipped in her class.
Goals 13-17

Question 35 - r

Separate 10 - week course in language arts.

Question 37 - e

24
180 days
45
Approximately 40-45
Integrated daily. Specially - 4 hours a week
About 30-32 (?)
45
At least 40

Question 45 - b & c

b - to fit class
c - Time
b - The curriculum changes I helped with.
c - I will change curriculum for elementary and give more integration to other content areas.
b - What I've discovered this year - include this
b - Concentrated block of time.
b - Simplified format
b - Expand ideas relating to 1st grade

Curriculum Questionnaire - Teacher Form

(Refer to questionnaire.)

Comments:

a. Responses tended to be very favorable to the CAST curriculum.

Curriculum Goals and Performance Objectives

1. A majority of teachers felt that the curriculum goals and performance objectives were clearly stated and reflected behavior that their students had not yet acquired.

Learning Activities and Associated Materials

2. A majority of teachers felt that the learning activities included were satisfactory and a few were innovative.

3. Four-fifth's of the teachers felt that the curriculum was superior to existing curriculum.

Training Assessment

4. Seven-ninth's of the teachers felt that the inservice training prepared them well to deliver the curriculum.

5. All teachers felt that the inservice was necessary to deliver all or part of the CAST curriculum.

6. Approximately three-fourth's of the teachers felt that the comic book was useful in delivering the curriculum.

7. Approximately seven-ninth's felt that the best way to deliver CAST was using the curriculum and comic book together.

Curriculum Implementation

8. A majority of teachers felt they would make some modification in the sequencing and content of the lessons.

Curriculum Summary

9. Over three-fourths's of the teachers felt that the curriculum was better than traditional materials in terms of student learning.

10. All but one of the teachers felt that the CAST curriculum could be integrated into the regular curriculum.

11. All teachers felt that their students learned an average amount or more about career education and career skills.

b. Possible areas to improve CAST program:

Item #10 "More variety of ways to learn concept" requested by 7 out of 18 teachers.

Item #15. Evaluation procedure responses indicated that three-fifth's of the teachers felt that the evaluation procedures could be improved.

Item #16. The sequencing of objectives is an area to be reviewed.

Item #31. Teachers indicated they had to extensively modify "about 1/2" of the lessons. This was primarily because of time.

Conclusion -

The teacher and counselor comments in the areas of learning activities, curriculum implementation and curriculum summary support the fact that the Phase II Lesson Plan Manual was best used as a teacher-counselor training tool not a delivery tool. Effective teachers-counselors, once having learned the skills, are more comfortable developing their own way of teaching the lesson than following someone else's lesson plan. Also, if teachers-counselors develop their own lessons it helps them to understand the skills better and fosters the investment of themselves to the successful delivery of the program.

Attitude Data

Student Reactions

A questionnaire, designed by the project director, was given to the students in an effort to determine the attitudes and perceptions regarding the CAST curriculum and program.

The selection of students was not systematic in that all the students at a grade level were from a single class. Therefore, the attitudes and perceptions of these students may be as much a function or determined by the teacher as by the curriculum. However, since the purpose of gathering this data was more for formative than product summative evaluation the information received is of significant value to the curriculum writers.

The following is a compilation of the two grade levels surveyed. Where possible, the two grades are presented with the item 7th, and 8th respectively. Where the items require lengthly analysis and responses, the grade levels are reported individually.

Student Name ____________________
School ____________________
Teacher ____________________
Date ____________________

CAST STUDENT SURVEY

1. Use the following scale to show how much you liked each of the CAST activities listed below. (Put the number in the blank before each letter.) Add any activities you feel were left out.

5 - liked the most
4 - liked a lot
3 - liked OK
2 - liked a little
1-- liked least

Average Response		
7th	8th	
3.0	3.1	___ A. Exploring many different jobs
2.7	2.4	___ B. Exploring many different job information sources
3.2	3.4	___ C. Exploring my interests
3.3	3.1	___ D. Exploring my values (those things that are important to me)
2.9	2.3	___ E. Learning how to ask questions
3.2	2.2	___ F. Learning how to make a career decision
3.2	3.1	___ G. Learning about my ideal job
3.1	2.5	___ H. Learning to attend, observe, listen and summarize
3.1	2.8	___ I. Learning about others' values and interests
4.1	4.0	___ J. Going on my internship
2.7	2.6	___ K. Re-evaluating my decision
2.9	2.8	___ L. Setting a goal and developing a program

2. Use the following scale to show how helpful each of these skills is to you in planning your career. (Put the number in the blank before each letter.) Add any skills you feel were left out.

5 - Most helpful
4 - Somewhat helpful
3 - OK
2 - A little helpful
1 - Least helpful

Average Response		
7th	8th	
3.4	3.3	___ A. Skills learned to explore jobs
3.0	3.9	___ B. Skills learned to explore job sources
3.4	3.3	___ C. Skills learned to explore myself
3.1	3.4	___ D. Skills learned to relate my interests to the job requiremants
3.0	3.1	___ E. Skills learned to make a decision
3.1	2.6	___ F. Skills learned to ask questions
3.4	3.1	___ G. Skills learned to conduct my interview
3.0	2.8	___ H. Skills learned to re-evaluate my decision
3.1	2.9	___ I. Skills learned to set a goal and develop a program

3. Which of the above skills (in #2) have you used in an area other than career? List the letter (or letters) here:

____ ____ ____ ____ ____ ____ ____

4. Think back to where you were in relationship to a job decision, before you started CAST. Circle the statement which best describes you at that time.

Average Response			
7th	8th		
	2	Before CAST	5 - Had definitely decided what job I wanted
9	5		4 - Had almost decided about the job I wanted
8	6		3 - Had decided what interest area I wanted
11	6		2 - Had a general idea of the job I wanted
5	6		1 - Had no idea what kind of job I wanted
16	7	After CAST	5 - Have definitely decided what job I want
9	11		4 - Have almost decided what job I want
7	0		3 - Have decided what job I want
12	6		2 - Have a general idea what job I want
2	2		1 - Have no idea of what job I want

5. Circle the most important thing you learned from your internship.

7th	8th	
6	9	A. What the worker has to do on his job
10	5	B. Finding out what the worker has to know about his job
9	5	C. Learning how the worker feels about his job
7	8	D. Seeing the working conditions
2	3	E. Performing a job activity

6. Circle all the things you learned about your values or interests that you did not know beforethe CAST program.

7th	8th	
15	14	A. Learned I had more values than I had thought
14	11	B. Learned my values change with new information and with experience
	11	C. Learned my values are different that other peoples' values
19	14	D. Learned that some jobs meet more of my values than other jobs
1	4	E. Learned nothing new about my values.

7. At your age, do you feel that it is important to be exploring your interests in relation to jobs? Why or why not?

8. Circle how many times you talked to your parents about career before you were in the CAST program.

7th	8th	
6	1	5 - more than 3 times per week
5	2	4 - 3 times per week
6	2	3 - 2 times per week
13	7	2 - 1 timeper week
15	12	1 - none

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Average Response	
7th	8th
8	5
5	2
11	5
11	10
8	4

-Now circle how many times you have talked to your parents about careers since you have been in the CAST program.

5 - more than 3 times
4 - 3 times
3 - 2 times
2 - 1 time
1 - none

9. Circle the number indicating how you would like CAST to be taught.

1 - as a separate course

2 - as part of one of my other courses

10. As a separate course, circle how long you think CAST should be taught at your grade level?

7	2
18	7
11	7
4	3
2	5

5 - 1 year course
4 - 1 semester course
3 - 10 week course
2 - 5 week course
1 - 3 week course

11. Do you feel that taking this course again would help you learn the skills better?

CAST Student Survey Comments

Question 7 - 7th grade

Yes, because you therefore would know what it is about.
Money and helping people.
Yes, because if you like it a lot you should be able to find out as much as you can about that job.
Yes, it will help.
Yes, because I want to know what I'm supposed to do.
Good education, you can get good pay.
To have some experience about the job.
Yes, it will help me when I get older.
Yes, because at a later age it could be too late.
Yes, so you have an idea what job you like.
Yes, so you can know if you would want it when you grew up.
You can get a better general idea of your job.
Yes, so you will know what you want to do.
It is important to know what job and about it.
Yes, because if you start learning young you will know more when you get older.
Yes, so you can have time to change your mind about the job.
Yes, so when you graduate most likely you will know whether or not you want the job.
To make money for a living.
Yes, because when we get older we may get a job, which doesn't suit us. But this way we are sure to get a good job.
Yes, because they should let us know how they work on their job.
Yes, because we're half way through school and should start thinking of a job.
Yes, because when I get older I'll know what kind of job I want.
Yes, because you have to know to get what you want.
Yes, because when it's time for your job you would know more about this job.
No, I don't like it.
Yes, because you can build up your interest in a job career and really put your mind to work in thinking about a job.
Yes, so you know what it's like.
No, because you might get another idea of a job but not another chance to explore it.
Yes, because you need to get ahead start to get a job and know how to interview.
Yes, because people learn about jobs.
Yes, because it will help us in the future.
Yes, it's OK but it's boring.
Yes, because you set your own goal, and you would be looking forward to that in the future. A job that you'd be learning at my age, and would know what job you wanted.
Yes, because it may make you change your mind about your job.

Question 11 - 7th grade

Yes, because I know what they're about and I could understand them better.
Yes, and I hope they do what I want them to teach a whole semester course.
No, I DON'T LIKE IT.
Maybe, if you did some of it with out a lot of second chances.

Question 7 - 8th grade

Yes, you have to start exploring sometime.
Yes, because you will have to have a job.
Yes, if you know now what you want to do, or have an idea, then you can gather information and prepare.
Yes, students are always saying why do we have to learn this? Well, they are finding out that they might be able to use this in their future job. (This pertains to school work.)
Yes, so you can get the education you need.
Yes, so when you get a job you know partly what you want to be.
Yes, because you can learn your values long before you start your job.
Yes, because I can start working at any time.
No, because the kids feel like it's just another class and they try to find shortcuts.
Yes, it's not too long till I'll be looking for a job.
Yes, you should plan ahead and know what's going on.
Yes, so I can get a good job.
No, because you can still figure out a job when you get older.
Yes, very soon I'm going to need a job.
Yes, in a way because you at least find out what the job does, and if it suits your values.
No, because it is not necessary yet.
Yes, so that you can ask questions and get a better understanding.
Yes, to know what to expect.
Yes, so you know whether or not you really want the job.
Yes, that way you will be able to find out more about your job.
Yes, because then when you get older you will know what your job is and so you can prepare for it.
Yes, to get me prepared for college.
Yes, it's only a few more years till I graduate.
Yes, because when you get older you won't know what you are really interested in, now you have a chance to find out what it is.

Question 11 - 8th grade

No, because we have already been taught the skills.
I don't think so. I will just be learning them over again. I won't learn anything new.
Yes, I got to be in the CAST Program in the seventh and eighth. I used the same job in both. I would now like to do another job.
Yes, because you would probably learn more the second time.
No, considering that I didn't learn anything the first time. The only new things more to dumb to really use.
Yes, to help me get prepared for the right job.
Yes, because you know what most of it now is you take it again you will know it better.

CAST Student Questionnaire

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Question 1. Like to ---- Exploring, learning doing

a. Item / Average Response

Item	Average Response	
	7th	8th
A	3.0	3.1
B	2.7	2.4
C	3.2	3.4
D	3.3	3.2
E	2.9	2.3
F	3.2	3.2
G	3.2	3.1
H	3.1	2.6
I	3.1	2.8
J	4.1	4.0
K	2.7	2.6
L	2.9	2.8

b. Rank order of Items - Average Response

Seventh grade

Item	Average	Description
J	4.12	Internship
D	3.30	My Values
G	3.24	Ideal Job
F	3.20	Career Decision
C	3.16	My interests
H	3.12	Attend, observe listen, summarize
I	3.10	Other's values, Interests
A	3.00	Different Jobs
L	3.94	Goals, Programs
E	2.90	Questions
K	2.74	Re-evaluate Decision
B	2.73	Information Sources

Eighth grade

Item	Average	Description
J	4.00	Internship
C	3.40	My interests
D-F	3.2	My values, Career Decision
A	3.12	Different Jobs
G.	3.11	Ideal Job
I-L	2.8	Other's Values, Interests; Goals and Programs
K	2.6	Re-evaluate
H	2.53	Attend, Observe Listen, Summarize
B	2.44	Information Sources
E	2.35	Questions

Question 2. Helpful Skills

a. Item / Average Response

Item	7th	8th
A	3.4	3.3
B	3.0	2.9
C	3.4	3.3
D	3.1	3.4
E	3.0	3.1
F	3.1	2.6
G	3.4	3.1
H	3.0	2.9
I	3.1	2.9

b. Rank Order of Items - Average Response

Seventh grade

Item	Average	Description -
G	3.44	Conduct Inverview
A	3.40	Explore Jobs
C	3.38	Explore Self
F	3.13	Ask Questions
D-I	3.13	Relate Interests to Jobs, set Goal and Develop Program
B	3.04	Explore Job Sources
H	3.02	Re-evaluate Decision

Eighth grade

Item	Average	Description
D	3.44	Relate Interests to Jobs
A	3.31	Explore Jobs
C	3.30	Explore self
E	3.12	Make a Decision
G	3.11	Conduct Interview
B	2.92	Explore Job Sources
I	2.93	Set Goal Develop Program
F	2.63	Ask Questions

Seventh Grade

Comparing Questions 1 and 2

(1) The response range 2.5 to 3.5 representing OK contained all Item averages except 1 (Question 1, Item J - Internship)

The Internship was "Liked a lot"

(2) Recognizing that response averages were "OK"

a. "Re-evaluating a Decision" tended to be Least Liked and considered Least Helpful of skills learned.*

b. Similarly, "Information or Job Sources" efforts were also Least Liked and considered Least Helpful.**

c. "Exploring Jobs" was ranked below average under Liked and very high under Helpful Skills learned.***

d. "My Values or Exploring Self" average responses ranked high for both Liked and Helpful questions.

e. Rankings of Items Common to Questions 1 and 2.

Rank Order of -

Liked Areas:	Helpful Skills:
My Values	Explore Jobs
Career Decision	Explore Self (Values)
Different Jobs	Questions
Goals - Programs	Goals - Programs
Questions	Job Sources (information)
Re-evaluate Decisions	Re-evaluate Decisions
Information Sources	Career Decision

Comments

Although these students "Liked" the CAST activity "Learning how to make a Career Decision", they apparently did not see the "Skills learned to make a decision" were helpful in planning their career.

This suggests that more time needs to be spent in relating to career planning. Because communicating is a new skill for 7th graders it will take more time for them to see the value of decision making as it relates to career planning.

* A possible explanation for 2a is that most teachers did not have time to teach this skill.

** Only one hour was spent on information sources. Because of time the internship was the main information source used.

*** Due to time again, exploring jobs was done through limited strategies and therefore, even though the students found it helpful, they are saying it could have been more interesting.

Eighth Grade

Comparing Questions 1 and 2:

(1) The response range 2.5 to 3.5 representing OK contained all Item Averages except 3 (Question 1, Item J, B, E)
The Internship was "Liked a Lot"
Information Sources and Asking Questions were "Liked a Little".

(2) The rank ordering of response averages indicates:

a. Learning how to "Ask Questions" was Least Liked and considered Least Helpful in planning their career.

b. "Exploring My Interests" and "Relate My Interests" were Liked much and considered very Helpful.

c. "Exploring My Values" and Exploring Myself" ranked high among common items under Liked and Helpful.

d. Rankings of Items Common to Question 1 and 2:

Rank Order of -

Liked Areas	Helpful Areas
My Values	Explore Jobs
Career Decision	Explore Self (Values)
Different Jobs	Career Decision
Goals and Programs	Job Sources (Explore Information)
Re-evaluate Decision	Goals and Programs
Information Sources	Re-evaluate Decisions
Ask Questions	Ask Questions

Comments:
The CAST program directed towards the skill area "Asking Questions" was both least liked and considered least helpful. The importance of this skill to decision-making is apparent from the attention the CAST program places upon asking questions. This skill represents a highly active intellectual involvement with a task. Perhaps the area's relatively low ranking represents the difficulty of teachers in communicating to students how this skill is the basis for all exploration for or expansion of information.

Question 3 Skills used in another area

a.

Item	Skill	Frequency	
		7th	8th
A	Explore Job	9	5
B	Job Sources	7	5
C	Explore Self	9	10
D	Interests	6	4
E	Decisions	16	13
F	Questions	13	7
G	Interview	7	3
H	Re-evaluate	8	5
I	Goal -- Program	6	5

b. Rank Order of Skills for Questions 2 and 3 Seventh Grade

Helpful in Planning Career	Skills used in Another Area
Conduct Interview	Make a Decision
Explore Jobs	Ask Questions
Explore Self	Explore Job
Interests	Explore Self
Goal - Program	Re-evaluate Decision
Ask Questions	Explore Sources
Explore Sources	Conduct Interview
Re-evaluate Decision	Interests
Make a Decision	Goal - Programs

c. Rank Order of Skills for Questions 1 and 2 Eighth Grade

Helpful in Planning Career	Skills Used in Another Area
Relate Interests	Make a Decision
Explore Jobs	Explore Self
Explore Self	Ask Questions
Make a Decision	Explore Jobs
Conduct Interviews	Job Sources
Explore Job Sources	Re-evaluate
Set Goal - Develop Program	Goal - Program
Re-evaluate Decision	Interests
Ask Questions	Interview

Comments: Seventh Grade

"Skills learned to make a decision" were noted most often as used in an area other than career planning. Surprisingly this item was considered least helpful in planning a career. **Decision-making** was liked OK, considered least Helpful of all skills in planning a career, but most often noted as Helpful in other areas. Clearly, the CAST Decision-Making process is not as well rated by the students as other skills when planning a career even though the students like the CAST approach and consider it helpful in other areas. This suggests that more time needs to be spent in showing students the relationship between decision making and career planning.

Comments: Eighth Grade

Skills learned to "Make a Decision" were used most often of areas other than career planning. A wide variation in rank order is present for the skill "Relate Interests" which is most Helpful in planning a career but nearly Least used in other areas. The skill "Asking Questions", although considered least Helpful in planning a career was used frequently in other areas. Again this pattern of having a skill rated high in the "helpful in planning a career" category and low in "helpful in other areas" category or vice-versa indicates that more emphasis needs to be placed on the relationship and value of these skills in career planning as well as the generalized usefulness in other areas. The use of the skills in areas other than career was not specifically addressed in the CAST delivery.

Question 4. Job Decision, Before-After CAST Seventh Grade

a. Response Data

Before avg. = 3.30 After CAST Avg. = 3.54

b. Impact of CAST

A ripple effect is present in the response data. The numbers indicate an upward shift of one level by three students at each before CAST level (e.g. three students with a before CAST response of 4 moved to 5 after CAST). Similar movement occurred for students at levels 1, 2, and 3 on the before CAST distribution.

Question 5. Learned from Internship

a. Response Data - Rank Order

- What worker has to know about job - 10
- How worker feels about job - 9
- Seeing working conditions - 7
- Performing job - 2

Comments:

Knowledge required and worker feelings dominate learnings about job activities. The response data seemed far short of the fifty-one students responding to the questionnaire.

Question 6. Learnings About Values or Interests

a. Response Data - Rank Order

Approximately 30 to 40 percent of the students were responsive to the learnings:

- More values than they thought - 15
- Values change with information and experience - 14
- Values are different than other peoples' values - 12
- Some jobs meet more values - 19

Question 7. Importance of Exploring Interests

a. Response Data

Yes - 36 92.3%

No - 3 7.7%

b. Student Comments

(refer to attached sheet with questionnaire.)

Question 8. Talking with parents about career **Seventh Grade**

a. Response Data

Rate	Before CAST	During CAST
5 - More than 3 times/week	6	8
4 - 3 times per week	5	5
3 - 2 times per week	6	11
2 - 1 time per week	13	11
1 - None	15	8
	45	43
	Average = 2.42	Average = 2.86

b. The major shift was out from the "NONE" level Before CAST and an increase at the "2 times per week" level. The average increase was equivalent to an average of 1 more time every two weeks.

Question 9. How to teach CAST

As a separate course - 26

As part of one of other courses - 17

Question 10. As a separate course how long should CAST be taught

1 year course - 7

1 semester course - 18

10 week course - 11

5 week course - 4

3 week course - 2

Question 11. Would taking course again help learn skills better

Yes - 27 % = 77.1%

No - 5

Maybe - 3

Question 4. Job Decision - Before, After CAST **Eighth Grade**

a. Response Data

Before CAST Average - 2.64 After CAST average - 3.58

b. Impact of CAST

The response average moved from midway between "Had a general idea" and "Had decided what interest area" before CAST to midway between "Had decided what interest area" and "Have almost decided what job I want." An obvious movement appears towards a career decision response.

Question 5. Learned from Internship

a. Response Data - Rank Order

- What worker has to do on his job - 9
- Seeing working conditions - 8
- Finding out what the worker has to know - 5
- Learning how worker feels about his job - 5
- Performing a job activity - 3

Question 6. Learning about Values or Interests

a. Response Data - Rank Order

- I had more Values than thought - 14
- Some jobs meet more of my values - 14
- My values change with new information - 11
- My values are different from other peoples values - 11

Question 7. Importance of Exploring Interests

a. Response Data

Yes - 21 87.5% No - 3 12.5%

b. Student Comments

(Refer to comments attached to questionnaire.)

Question 8. Talking with parents about career — Eighth Grade

a. Response Data

Rate	Before CAST	During CAST
5 - More than 3 times/week	1	5
4 - 3 times per week	2	2
3 - 2 times per week	2	5
2 - 1 time per week	7	10
1 - NONE	12	4
Average =	1.88	2.77

b. The average number of talks with parents increased approximately 1 time per week during CAST. Several students began to talk with parents who had not prior to CAST.

Question 9. How should CAST be taught

As a separate course - 14
As part of one of other courses - 11

Question 10. As a separate course how long should CAST be taught

1 year course - 2
1 semester course - 7
10 week course - 7
5 week course - 3
3 week course - 5

Question 11. Would taking course again help learn skills better

Yes - 11
No - 11
Maybe - 4

Comparing seventh and eighth grades

Response Data - CAST Student Questionnaires

Question 1. Rank order listings of response averages were similar.

Question 2. The rank order listings differed most for:

Item	Grade 7	Grade 8
Conduct Interview	1	5
Relate Interests to Job	5-6	1
Make a Decision	9	4
Ask Questions	4	9

The area "Ask Questions" ranked last for eighth graders under Liked Areas and Helpful Skills. This area was not ranked so low by the seventh graders.

Question 3. Rank orders of response averages for seventh and eighth grade data were similar.

Question 4. The before CAST average for seventh graders was higher than for eighth graders. However, after CAST averages were essentially the same - approaching "Have almost decided what job I want."

Question 5. The seventh graders were not as interested in what a worker does on job as were the eighth graders. The number of respondents for this question was small.

Question 6. Responses were similar. However, the items to this question received responses from only a small percentage of the students.

Question 7. "Yes" response percentages were near 90% for both seventh and eighth graders.

Question 8. The eighth graders increased their talks with parents more than the increase percent in seventh grade responses. Both grades approached an average of "2 times per week" during CAST.

Question 9. The majority of both seventh and eight graders prefer CAST be taught as a "separate course". However, approximately 40% of the respondents indicated their preference was for CAST to be "part of one of my other courses."

Question 10. Most students preferred CAST to be taught either in a "10 week course" or in a " 1 semester course."

Question 11. Approximately 80% of the seventh graders felt taking CAST again would help to learn skills better. Approximately 40% of eighth graders felt that way.

Conclusions

Seventh and eighth graders differed in their perception of what was most valuable to them in the CAST program. For the most part, it can be concluded that the major reason the students differ in their responses to the various components of the program is due to the differences in teacher emphasis and understanding of the various skills being taught and the teacher ability to help the students see how these skills are useful in their day to day living.

Students talked with their parents more about their career because of their involvement in the CAST program.

Students felt that CAST should be taught either as a 10 week or semester course so they could have more time to learn and practice the skills.

Students were generally very favorable to the CAST program. However, teaching the class as we did, one day a week for the entire year was determental in holding student interest. In spite of the way it had to be taught, it can be concluded that students did learn many new skills that were helpful to them.

Parent Survey

Three Junior High teachers, one from each grade level, surveyed selected parents of their students in an effort to assess their attitudes and perceptions regarding the CAST program.

As with the student surveys, the selection of teachers and their subsequent selection of parents does not allow one to make generalizations regarding the curriculum per se. The reaction of these parents are likely to be determined by teacher quality as well as or more than curriculum characteristics.

Two different forms of the questionnaire were used. The 7th and 8th grades used similar forms while the 9th grade used a form designed a year earlier.

The following is a copy of the questionnaire and the frequency of responses to the items. A total of 39 parents returned the questionnaire.

Dear Parents,

Can you help me evaluate our career program? Please check questions below.

Questionnaire for Parents

1. Did you know that your child was learning about jobs?

Group 1		Group 2	
Yes	No	Yes	No
11	1	6	0

2. Do you feel that it is helpful for young children to learn about many careers?

Very much	some what	a little	
4	2	0	8th
12	1	0	7th

3. Has your child spoken about the workers who have visited the class?

Librarian 3

Nurse 5

Policeman 9

Policeman and Dog 11

Mailman 9

Ambulance Driver 9

Principal 6

Yes	No
5	1

-about the places we have visited?

Post Office 11

Police Station 9

Dairy Farm 1

McDonald's 2

Dawn Donuts 2

Yes	No
5	1

4. Are you familiar with our class rating scale:

P - participant - student does just what the teacher asks

C - contributor - student does what is asked plus something extra

L - Leader - student does what is asked - plus extra - plus helps other student to be a participant

Group 1		Group 2	
Yes	No	Yes	No
9	3	6	0

5. Does your child ever report when he has earned a P, C or L?

Group 1		Group 2	
Yes	No	Yes	No
10	3	4	1

Career Achievement Skills Training Program

Questionnaire for Parents

Form 2

During the past semester, your student has participated in the Career Achievement Skills Training (CAST) program. We need your help to prepare for the second year of our program. We would like you to tell us how the program has helped your son or daughter with his or her career achievement.

Please fill out the accompanying questionnaire. Your answers to the questions will be treated confidentially.

Our student's school is ________________________________

Our student's name is ________________________________

Please put your completed questionnaire in the accompanying envelope. Have your student return the sealed envelope to his or her teacher. It will be sent to:

Judy Battenschlag
Director, Project CAST
Irving Elementary School
Square Lake Road
Pontiac, Michigan

Item 2. Do you feel that you have become more involved in your child's career exploration since his or her participation in the CAST program?

	circle one
1. Definitely have not	1 - 0
2. Probably have not	2 - 3
3. Probably have	3 - 7
4. Definitely have	4 - 9

Obvious greater involvement indicated by these parents.

Item 3. How well is your child doing in his or her career exploration?

Answer the question twice:	once for BEFORE the CAST program (before Jan., 1973) circle one BEFORE CAST	Once for SINCE, the CAST program (since Jan., 1973) circle one SINCE CAST
1. very poorly	1-0	1-0
2. poorly	2-8	2-2
3. well	3-6	3-6
4. very well	4-2	4-9
	Average - 2.625	Average - 3.411

Increase from less than "well" to better than "well".

Item 4. Read statements A through F below.
Then select 1 of the 5 answers that best shows how much help you feel your son or daughter has received in each of the areas A through F.

Please use this scale:
1. no help
2. hardly any help
3. some help
4. a lot of help
5. a great deal of help

Answer the question twice:	once for BEFORE the CAST program (before Jan., 1973) Circle 1 of the 5 BEFORE CAST	once for SINCE the CAST program (since Jan., 1973) Circle 1 of the 5 SINCE CAST
A. Discovering new occupational possibilities he or she might look into.	Avg. - 2.53	Avg. - 4.00
B. Getting useful information about different occupations	Avg. - 2.53	Avg. - 4.00
C. Learning to make logical step-by-step choices between occupations	Avg. - 2.13	Avg. - 3.63
D. Seeing connections between his or her values and possible occupations	Avg. - 2.53	Avg. - 3.8
E. Seeing connections between his or her school experience and future plans	Avg. - 2.88	Avg. - 4.07
F. Learning to set goals and make step-by-step programs to reach those goals	Avg. - 2.59	Avg. - 4.06

Typical increase was from less than "some help" to "a lot of help" in each fo the six areas.

Item 5. Do you feel your son or daughter is better able to make decisions about his or her future as a result of participating in the CAST program?

	Circle one
1. definitely is not	1-0
2. probably is not	2-3
3. probably is	3-5
4. definitely is	4-9

Item 6. Think about the things your son or daughter has done to explore careers in the CAST program. List 3 things that he or she has done at home to show that he or she was exploring a career.

1. ____
2. ____
3. ____

CAST PARENT QUESTIONNAIRE COMMENTS - Item 6

Lori wants to be a nurse so there really isn't much she has done at home. Her trip to the hospital was postponed and as yet has not been rescheduled. She is looking forward to it very much. She does plan on being a candy striper when she is old enough.

Bought chemistry set. Reads more about future jobs. Discusses more about future at home.

Discussion with parents about a teaching career. Rap session with sister who is in 2nd yr. college seeking a teaching career in special education. Playing school with younger brother and sister, enjoying the teacher role.

Reading books. Asking about the money it would take to go into his career. How long it would take before a job would be ready after he finishes.

Preparing intelligible questions for her interview. Talking to concerned neighbor about her career. She did have a complaint about the career she wants, too much schooling.

Reading hospital books here at home. Had some visits with a R.N. Had (2) visits with a L.P.N.

Talks about different careers she would be interested in. Type of courses she will be taking.

Discussed science classes that she may need. Spoke of her field trip. Has become conscious of grade requirements for field of her choice.

Looked up different careers in World Book. Discussed with parents 2 or 3 career possibilities he was interested in. Told in detail of visit to police station. It was field trip some of students took. He was very impressed.

Babysitting and learning to get along with other persons. Talked to different people about their job. Learning the value of money and how to spend it.

Has did odd jobs like yards, cars, help to build things. Has explored differences possible in cars, yards, making things that work. Has earned his own money from odd jobs.

Sports.

Wrote for information for RN and LPN. Reads articles and asks questions - same as before. Made tour of hospital difficult at this age to get on-job look at nursing because of nature of profession.

Got ready to study interview at airport. Find out how much education needed for jobs. Qualifications for different jobs.

Conclusions

Parents talked with their children more about careers after taking CAST than before.

Parents felt that their children had been helped in seeing the value and in being given the steps to prepare them for their career.

Parents were more involved in their childrens' career exploration and planning as a result of CAST.

CAST Participant Reactions

On the following page are reported CAST participant responses to a series of questions regarding the CAST program. The purpose of securing responses to these questions was to determine how the participants viewed the CAST program - past, present and future.

Participant Self Report Data

1. Where did you see the CAST Program going when you were first exposed to it during training?

Very excited about using skills I learned (especially attending, responding and ROPES) in classroom. Thought CAST would be good experience for students.
Saw great possibilities. Couldn't do everything wanted to because lack of time and later lack of interest.
I didn't know.
Help children become aware of career possiblities.
Designed to improve my skills, using career ed. as a vehicle.
St. Basil's training program.
As a unit I would try and an opportunity to better my own skills.
I didn't particularly see it going anywhere.
I did not see!
Didn't realize it's broad applications.
Following the trend of Career Ed. in the schools.
I thought it would really be well received and adapted.
Pilot project.
Tried once or twice and then shelved. Too much work for some people.

2. Where do you see the CAST Program going now that you have been involved in it for a year?

Somewhat disillusioned since teaching CAST. Students not turned on, lessons dry. Program needs vitality.
The skills have implications for expansion in content areas and a min-course of the skills and objectives in the CAST to be taught.
Greater influence. Skills taught to children can be applied to all content areas - children can lead other teachers and students.
If funds are available it could be an answer for many bewildered teachers.
Same place, only well designed to keep improving my skills.
Students should learn how to expand, choose and act on decisions. It is an important process of maturing.
Being included in the curriculum.
Expanding.
As a continuing element of the program particularly in the language and social studies areas. Also, practical arts should explore it in part.
I see it becoming an integral part of the curriculum so that students can make decisions, develop programs which directly effects their lives and others.
I would like to see a CAST class set up at Madison as an elective with the goal being that the student will go on an internship and having the option of continuing the expanding, narrowing process during the last part of the class.
Everywhere.
Branching into any number of areas since it's so well integrated.
Program will go far. It helps students to look at themselves more closely.
I think it has to be modified, if it will be expanded. It requires a lot and I don't think most people are dedicated enough to give all it needs.
School district wide staff development CAST delivered district wide K-12.
Continued and growing with successful people being trained and incorporated in the curriculum - Language Arts.

3. In your school, do you feel the CAST Program should become a part of the curriculum?

Many skills worthwhile for students; with alterations program could deliver skills effectively.
Yes, but delivered in a shorter block of time.
Yes, it is a 10-week mini-course.
Not separately.
Yes - 12
Yes - 3
I'd like to see it integrated into curriculum.
Language Arts - 3 week block.

4. What are the alternative ways of getting it into the curriculum?

Setting up as a specific course.
Social Studies unit or elective as a mini-course.
Integration in all elementary subject areas.
Guidance.
Mini-course.
I would like to see Language Arts Dept. get involved. Social Studies could do it as a unit.
To make it a new subject.
Survey CAST responsible for curriculum to determine those who are interested in delivering CAST.
Ten week, semester, full year.
Integrated into regular curriculum.
Have one teacher teach CAST as special subject.
Integrate it into different content areas.
Get administrative backing and more help.
Training special people.

5. Would you be willing to deliver the CAST Program as a class for a semester?

a) 1 Period a day
b) 2 Periods a day
c) 3 Periods a day
d) 4 Periods a day
e) 5 Periods a day
f) Not at all
g) A 3-week unit
h) Other ________________

a - 3
b - 0
c - 0
d - 0
e - 0
f - 1
g - 6
h - 4

Comments: H - Integrate daily
Not particularly in English
1 period/day for 10 weeks
1 per week
A 6-week course taught by 1 teacher, 5 hrs. a day

a - 0
b - 0
c - 0
d - 0
e - 0
f - 0
g - 2
h - 1
h - Depends on where I am.

6. What steps would be necessary to include CAST in the curriculum?

Convince the principal of the necessity. Hire a teacher to specifically teach CAST.
Administration support and needs assessment - staff involvement and ability to appreciate the skills taught.
Train other teachers.
Money or fit into Social Studies.
Principal is in favor. The program is now a 10-week mini-course.
Write a short program as part of a curriculum.
Present test data to building principal.
Just show the principal how to fit it in.
Greater education of school personnel. Greater level of funding, millage, improved teaching circumstances.

1. Write curriculum, giving ways it can be used in various subject areas. 2. Get administrative support. 3. Get principal support. 4. Inservice teachers. 5. Include more elementary teachers.
1. Teacher training. 2. Administrative support.
An official communique from the Director of Curriculum to place it in the Language Arts - Social Studies curriculum.

7. What are the possibilities, realities or obstacles of this coming about in your school?

I am not sure.
Interested persons should be trained (being sure to include INTEGRATION idea and not just "one more subject to squeeze in".) Stress value of skills - carry over.
Shakey.
Other teachers also need background training in the delivery of CAST.
Some obstacles.
Good, since we have people trained.
Money.
As a curriculum developer for part of the math curriculum, I see a need for the career component becoming a part of our curricula and could push for that in the program for the school year of'75.
Very possible.
At this point doesn't look promising. Must be integrated into existing program.
Without someone working on above items (Q. 6) (trainers) not very good. A few teachers, at a few schools, might do some things, but it wouldn't be systematic and it would die out, soon.
1. Include more elementary people in the training. 2. Direct 1 to 1 contact with principals via trainers or administrators.
It would be approved if it were part of the curriculum. No problems. "T" believes in CAST!

8. How successful do you feel you were in delivering the goals of CAST in terms of:

a) the level of delivery that was expected?
b) the degree to which your students learned the skills?
c) the amount of time you had to deliver the program?
d) the degree to which you understood the content?

a -
I feel that my delivery level was adequate, but I had hoped for much better.
Okay
I didn't meet my personal goal.
Very
I wasn't up to par.
Good Incomplete
Yes
Very
Fair
b -
I feel that the students picked up many of the skills they were supposed to, certainly not all.
Fair
Average
Yes
Mixed
Average to above average
Average
High
My delivered probably hampered this somewhat.
Okay
c -
Okay
I had a target teacher. Time was somewhat limited and not enough continuity delivering once or twice a week.
I feel I was hindered by the fact that I only came in once a week and otherwise had minimal contact with the class, so I could not know them.
a year
Enough
OK
Good
Yes
Adequate
Not enough because of building assignment delays.
d -
Could be much better
Well
I have a much better understanding now than when I began; I know where it's going; I did not have a thorough understanding of that before.
Yes
Good
Well
Mediocre, I did not do the job I should have.
Better as the year progressed.
I did not understand the overall content, I learned and understood it in pieces.
Okay

a -
Level 3
Level 3
b -
Level 3
Level 3
c -
Level 2
Level 2
d -
Level 4
Level 4

9. If you were not as successful as you would have liked to have been, please list the reasons why.

a) Things that you could have done.

b) Things that others could have done.

a -
Revised the curriculum to make it more relevant to the student.
I was involved in another new program which took a long amount of time. I just could not have squeezed out any more time for CAST.
Taught it all at once.
Paper work is heavy. I should consolidate to emphasize most important aspects.
Studied program to become familiar. Planned better.

b -
Counselor input - I feel he did a great job, but that there are some additional possibilities that could be developed.
Helped me to meet deadlines. Helped me to see the total perspective. Give specific answers to specific questions instead of spending so much time exploring with me. I just did not have time for it.
Helped more on arranging the internships.
Trained us or given us moreknowledge of the CAST program, before we were asked to teach it.
a -
Gone into teachers class more often for delivery. 1. Worked with him more at beginning. 2. Made him feel it was more him. 3. Had better classroom management.
b -
Explained importance of project to building principal which would free me to do more CAST delivery.
1. Target teacher could have been better prepared. 2. Could have had more principal support.

Do you see yourself being involved in the CAST Program next year?

a) to what extent?

b) Under what conditions?

Yes - 9
If I am in Pontiac I would consider it.

a -
Teaching a mini-course on careers.
To the extent that I can fit it into my schedule and the powers that be intend me to be a part of it.
Teaching and exposing others to possibilities of CAST.
In HRD training, but not teaching career ed. in my class.
1 hr. per day in 10-week mini-course.
I would like to teach the revised curriculum and help with other writing projects.
In one block of time.
Yes, but limited.
Teaching my own group Sept. - June and spreading the working to encourage others.

b -
It would help to have resource person or aide available.
That it be integrated into L.C.
Need time. Hope for more source materials to be available.
If it is delivered in a shorter block of time and doesn't interfere with my present teaching responsibility.

Yes - 3

a -
Trainer, if needed
Trainer
Trainer

b -
Millage passes. Administrative support.
I will need to be in a position in the district which will allow me to use my skills - a flexible position to allow time for training.

1. What grade level(s) have you taught the CAST curriculum?
   2-0 3-0 4-1 5-1 6-0 7-9 8-2 9-2 10-2 11-2 12-1

2. Was it appropriate for that level? Yes - 13 No - 3

3. When did you start it? 72-73-3 73-74-12 Both -3

4. At what level do you feel it more appropriate?
   2-3 3-3 4-3 5-4 6-5 7-10 8-10 9-11 10-8 11-6 12-6

5. Do you feel there is a need to have Career Education in the Schools?

   Yes - 17 No - 0

6. If yes, how would you rate the CAST Program?
   Falls short of - 1 is adequately - 7 Is more than adequately - 10
   ... meeting the needs of the students.

7. Rate the following program components in order of their importance to you in delivering your content area -
   (1 - low 3 - high)

Interpersonal Skills	1-0	2-1	3-17
Career Development Skills	1-2	2-7	3-9
Educational Skills	1-1	2-4	3-14
Physical Skills	1-4	2-7	3-6

8. Rate the following program components in order of their importance to you in delivering the CAST program.

Interpersonal Skills	1-0	2-1	3-17
Career Development Skills	1-0	2-4	3-14
Educational Skills	1-0	2-5	3-13
Physical Skills	1-3	2-7	3-8

9. Have you been involved in other career education programs? Yes-8 No-10

10. If yes, how do you compare this program to the other which you have been involved in?

    CAST far surpasses.
    Head and shoulders above.
    This is best.
    Better than other program.
    PCDP & CCEM - This is a better program because it is more systematic and delivers skills to students, helpers and trainers. CAST has been incorporated into my present program - Elementary Career Guidance Consultant
    No comparison - this delivers skills CCEM delivered some units.
    Better.
    This program is far superior.

Conclusions

Most teachers and counselors were very favorable in seeing CAST as a necessary part of the school curriculum as well as seeing its relationship to their own content areas.

Teachers needed help in seeing how they could integrate CAST with their content area. Some still felt they have to "leave something out" to make room for CAST.

Teachers felt that they did an average job in their delivery of CAST. Many said that they did not understand the skills in the beginning which not only made their deliver difficult but made them very dependent on the lesson plan manual.

In total, the teachers and counselors were pleased with the program and their delivery, but recognized room for improvement in both. Having taught the program once gave them a better understanding of what they could have done differently to improve their delivery.

Reliability Procedures

Scorer and Scoring Reliability Procedures

The instrumentation used in this project was, for the most part, developed during the project specifically to obtain data for evaluation and/or assessment. As a result, it was necessary to study these instruments and procedures in an effort to determine if they were yielding reliable data. Several techniques are available, most of which require large groups, control groups, repeated measures and/or parallel tests. Due to the developmental nature of this project and the small n's (for staff 11, trainers 7, and students, six classrooms) standard procedures are not viable. None the less, several assessments of instruments stability were attempted. Several correlation coefficients were obtained from two or more administrations of the same instrument, scoring and rescoring and comparison with expert ratings.

Reliability-Teacher

For the teacher assessment, the trainer scores were compared to an experts rating. The Pearson correlation ranged from 0.49 to 0.96 with an average of 0.89. Additional analysis of the scores indicated that although the correlation was high the individual ratings on the items differed significantly i.e., the means were statistically different as determined by a t-test. The trainers gave higher scores 63% and lower scores 30% of the time when compared to the expert.

An internal reliability check was also made which indicated that there was a fairly high internal reliability among the trainers. The correlation between the trainers ranged from 0.43 to 0.69.
On a rate-rerate study the trainers showed less consistency with correlations ranging from -0.78 to 0.66. In 7 out of 9 cases, the first rating was higher than the second, indicating some systematic changes in procedures or perception regarding the use of the instrument occurred.

In a general sense, the instrument for teacher assessment or evaluation tends to show some reliability. Unfortunately, the number of teachers and trainers involved did not allow for detailed study and therefore, considerably more refinement is needed before it will produce reliable enough data to be useful as an evaluation tool.

Student Assessment Reliability

Correlation studies were made to determine the accuracy and consistency of the trainers in their checking of the student post test.

The correlations between the scorers and the expert scorer ranged from .71 to .98. The data reveals a tendency for the scorers to be consistently lower than the criterion rater. However, the scores are not different enough, educationally speaking, to in any way negate the results showing the experimental students out-performing the control.

PALS EVALUATION

The following is an excerpt from the PALS project evaluation report. The inclusion of this report is made on the grounds that the curriculum used in the PALS project has as its base, the CAST Curriculum Model. Also, the director and instructional leaders were trained in the CAST program, delivered CAST during Phase II of the project and served as trainers during Phase III. In an effort to make the curriculum more appropriate for senior high school and the PALS project goals, the project staff made modifications and additions to the curriculum.

Re: Final Evaluation Report - PALS - CAST Pilot Evaluation

INTRODUCTION

This memorandum will report the results of a pilot evaluation of the Pontiac Adult-Student Learning System (PALS) Project. Since it is my understanding that the students in the PALS project received the Career Achievement Skills Training (CAST) curriculum, evaluation of the success of the PALS project indirectly involves an assessment of the effectiveness of the CAST curriculum. It must be noted, however, that this evaluation did not deal directly with CAST curriculum as a separate input into the PALS program. A description of the evaluation design and its limitations will be followed by a report of the results of the data analysis. Measurements were collected on several aspects of student performance in the test situation, a simulated job interview described below, as well as on various individual background characteristics. We must here stress the pilot nature of this evaluation. Our aim was to incorporate measures of several aspects of subject performance with a relatively small sample size. We realize that only gross differences will be apparent but it is our hope that these differences will be signposts guiding more sophisticated and complex future evaluations.

PALS pilot evaluation-variables controlled

The decision which an employer makes about the employment of an applicant is a complex one in which several factors operate. To the extent possible in this limited pilot evaluation, an attempt was made to control those factors which could be identified.

Sex To eliminate the confounding influence of the gender of the applicant on both performance in the interview and on the interviewer's decision to hire the applicant, only female subjects were selected. Females were chosen rather than males because in the groups from which subjects were selected there were too few males. The relatively small number of males may suggest that gender operates as a factor in the trainees' self selection with the program and on the ultimate performance of the trainees. In future evaluations, it is suggested that the performance of both male and females be examined.

School The PALS project is in operation in the two Pontiac Senior High Schools. To avoid the confounding influence of the contextual effects of the different buildings, only those trainees in Pontiac Northern High School were selected for inclusion in the pilot evaluation. A more ambitious evaluation would examine whether or not there are between-building differences in PALS.

Grade In order to limit possible age grade differences and differences in motivational level of subjects, selection was made from lists of tenth grade females. Subsequently, it was discovered that two (2) of the participants in the research were eleventh graders. However, inspection revealed no apparent differences related to age.

Trainer There are three PALS trainers. Clearly each probably conducts the training somewhat differently. This evaluation did not measure inter-trainer differences. The subjects were selected from one trainer only. The extent of the differences produced, if any, by different trainees is left to future evaluations.

Interviewers Two professional personnel interviewers from the Pontiac School System interviewed the subjects in this evaluation. Our decision to use these men was based on the assumption that since they worked in the same system, they would use similar criteria in deciding whom to hire. Analysis of the results fails to yield any evidence of systematic differences between them. Interviewer 1 conducted interviews with significantly fewer verbal interactions than Interviewer 2 ($r= -.613$, $p < .001$)* and subjects interviewed by Interviewer 1 tended to say more (a higher number of subject responses) than those seen by Interviewer 2 ($r= .533$, $p < .01$). In addition, students interviewed by Interviewer 2 were significantly more likely to rate him higher on "attending" behavior (viz., "leaning forward" toward subject) than were subjects interviewed by Interviewer 1 ($r= -.769$, $p < .001$). No other differences were observed. In short, our assumption that by using professional personnel interviewers we would be able to standardize the quality of the interview situation which the subjects confronted does not seem to have been contradicted in our data. We conclude that there is no reason to believe that there was any significant difference in the behavior of the interviewers.

Job foils Subjects were informed that they were to apply for jobs. Two jobs (See Appendix A.1 and A.2) were presented to the subjects as foils: Summer office assistant and counselor-helper. These jobs were selected for two reasons. First, a relatively low level of skill was required for either job so that subjects would be less likely to be discouraged because of skills required. Second, each job represents a different interest perspective: The summer office assistant was directed at those subjects interested in "things"; the counselor-helper was designed to appeal to those subjects interested in "people". By utilizing these job foils our hope was to hold relatively constant the two important factors in job choice - skill and interest level.

Payment of subjects All subjects were paid $2.50 for their participation in the evaluation. The decision was made in favor of uniform remuneration since it was thought that this procedure would give additional credibility to the disguise described below.

* Interviewer 1 was assigned a value of "1" and Interviewer 2 a value of "0" for their analysis. Product moment correlation coefficients were produced for the relationships between this "dummy variable" and the others measured.

Race The racial composition of the student participants was mixed. Of 23 subjects, 9 were listed as "white," 13 as "black," and 1 as "Latino." The relationships between race and the dependent variables under inspection were examined.* Examination of these relationships revealed that altho non-white subjects tended to rate interviewer reaction to them lower ($r = -.457$, $p < .02$) than white subjects and white subjects tended to do more preparation for the interview situation than non-whites ($r = .378$, $p < .05$), no racial differences were found on interview related variables.

PALS pilot evaluation - test situation and variables measured

A primary focus of this pilot evaluation was overall effectiveness of the PALS program (and indirectly, the CAST curriculum) in training its recruits to perform well in an employment interview situation. Therefore, the test situation involved a simulated job interview in which subjects would apply and be considered for fictitious jobs. In general, it was thought that the simulated job interview provided an arena where PALS-imparted skills could be tested under field conditions.

In order to minimize the potential bias introduced by the individual's personal involvement in the PALS project, an attempt was made to disguise the fact that what was being evaluated was the PALS project. Subjects were informed that an evaluation of interview techniques was being conducted. (See Appendix B). They were asked to participate in this evaluation by "going through a pretend job interview." Our intention was to focus the subject's attention on the interview itself and distract them from concentrating on their performance.

The interviewers were "blind" to which subjects were PALS trainees and which were not. They were asked to evaluate subjects for employment using the criteria which they habitually use to make these kinds of decisions. To facilitate their task, the standard employee rating chart used in the Pontiac Schools was modified for use in this evaluation. (See Appendix C).

In addition, the interviewers were also asked to rate the applicant on the PALS-related dimensions of "responding" and "attending." (See Appendix D). These ratings were to be accomplished after the interviewer's other evaluation of the candidate was completed. In debriefing the interviewers, a problem with this procedure became apparent. Having the interviewer rate the applicant on PALS dimensions alerted the interviewers to "fingerprints" of the PALS program and, consequently, enabled them to identify which subjects were PALS trainees. One interviewer stated he could identify PALS trainees by the way they sat. The value of having interviewers rate on PALS criteria would seem outweighed by the contamination which identification of the PALS trainees introduces.

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* Race was converted into a "dummy variable" with "white" coded as "1" and "Non-white" coded as "0".

Each interview was observed and rated by a trained PALS observer whose responsibility it was to rate the levels of "responding" of both the subject and the interviewer and the level of "attending" of the subject. (See Appendices E and F). "Responding" was rated on a three-point scale: "1" was scored if the subject was "inaccurate, takes away from what is said"; "2" was scored if the subject "tries to clarify but misses most of" content; and "3" was scored if the subject was "able to clarify what the interviewer is saying." Each individual response was rated on the "responding" dimension. "Attending" was rated on a five-point scale which scored the subject "1" if he paid no attention to "5" for optimal attention. For each third of the interview, the subject received an "attending" rating.

Finally,the subjects themselves were asked to rate both their own and the interviewer's performance. After completing the interview, subjects were asked to complete a questionnaire including items measuring the levels at which they perceived the interviewers "responding" and "attending" as well as their own "responding" and "attending" levels. (See Appendix G). Their data will not be extensively analyzed for this report. However, we note that all the subjects perceived the interviewer as being "very interested" and every subject saw herself as "very interested" in the interview. This would seem to indicate a generally favorable reaction to the test situation.

Selection of subjects

Although this pilot evaluation design does not incorporate a control group in the strict sense, some attempt was made to select a Non-PALS group for the purposes of comparison. It must be borne in mind that the lack of a control group severly limits the amount of confidence which can be placed in comparative statements. Bearing in mind this limitation, we shall describe briefly the selection of subjects from PALS and a roughly comparable non-PALS population.

The availability of a group of tenth-grade females at PNHS to whom objective tests were administered (similar tests were also administered to PALS trainees but their data are not yet available) allowed us to select 20 subjects whose interests were comparable to the PALS females. Twenty names were selected at random from a list of 33 of these high school students.

Northern High School's section of the PALS training program included 25 females of which a random 20 were chosen for inclusion.

These 40 subjects were than randomly assigned to the two interviewers. Of the 40 possible interviews, 23 were completed yielding the following design:

	PALS	NOT PALS	TOTAL
INTERVIEWER 1	5	5	10
INTERVIEWER 2	7	6	13
TOTAL	12	11	23

The results from this design are described on following page.

Findings

This report will present the results of an analysis of the data gathered in this evaluation. In addition to a discussion of those variables which were directly under scrutiny, i.e., PALS-related variables, extensive data on the characteristics of the individual subjects will be presented. Our major finding in this analysis is that these background variables do not seem to be significantly related to outcome.

PALS-training as a predictor of job interview performance

Subjects hired The interviewers were instructed to hire no more than half the applicants whom they interviewed. Slightly less than half, ten applicants, were hired. As Table 1 demonstrates, PALS training would seem to be an asset in performing well in the interviews.

TABLE 1

RELATIONSHIP BETWEEN TRAINING RECEIVED
AND DECISION-TO-HIRE FOR PALS
PILOT EVALUATION

	HIRED	NOT-HIRED	TOTAL
PALS TRAINED	9	3	12
NOT PALS TRAINED	1	10	11
TOTAL	10	13	23

$$X^2 = 7.64 \quad \overline{P} < .005$$

Nine of the ten applicants who were "hired" were PALS trained. In other words, the PALS trainees had two chances in three of being successful whereas the subjects who were not in PALS program had less than one chance in five. The relationship appears significant and therefore, we have no reason to believe, from these data, that PALS is not effective in training subjects to perform well in job interviews.

Interviewer rated subject behavior. In addition to making a summative judgment about hiring or not hiring the subject being interviewed, the interviewers, using their standard rating form (see Appendix C), also scored the student applicants on other aspects of their presentation of self during the session and rated subjects on PALS-related behavior (see Appendix D). Each of the nominal categories was assigned a numerical value, assuming an equal interval scale and means were computed for the PALS-trained and "control" groups. For example, on the interviewers rating sheet which appears as Appendix C, the descriptive terms listed next to the series of "personal" characteristics were coded as follows: "slovenly" = 1; "careless" = 2; "appropriate" = 3; "tasteful" = 4: and, "smart" = 5. The corresponding code numbers for all the nominal categories are recorded on the forms in the Appendices. The results of the analysis of this set of means appears in Table 2.

TABLE 2

MEAN SCORES FOR PALS-TRAINED AND "CONTROL" GROUPS ON INTERVIEWER-RATED BEHAVIORS

	Mean Scores for PALS-CAST	Mean Scores for CONTROL	DIFFERENCE	t
Interviewer's Rating of Student's "Dress, Grooming, Etc."	3.67	2.80	.87	3.15**
Interviewer's Rating of Student's "Voice"	4.33	2.89	1.44	4.62**
Interviewer's Rating of Student's "Use of English"	3.83	3.00	.83	2.80**
Interviewer's Rating of Student's "Physical Health-Vigor"	4.25	3.20	1.05	3.91**
Interviewer's Rating of Student's "Personality"	4.17	2.90	1.27	4.07**
Interviewer's Rating of Student's "Mental Reactions"	4.17	3.00	1.17	3.92**
Interviewer's Rating of Student's "Social Poise"	4.00	3.11	.89	3.04**
Interviewer's Rating of Student Interest During Interview	3.00	2.40	.60	3.67**
Interviewer's Rating of Student's Feedback During Interview	2.90	2.50	.40	1.81*
Interviewer's Rating of Student's Organization	2.90	1.90	1.00	3.40**
Interviewer's Overall Evaluation of Student's Performance	3.42	2.50	.92	1.96*

* Significant at .05

** Significant at .01

NS Not Significant

The results of the analysis presented in Table 2 displays that on every variable rated by the interviewer, PALS-trained subjects score significantly higher than the "control" subjects. As reflected in these ratings, PALS subjects, on the average, were better "groomed," used their "voice" and "English" better, were in better "physical health," had more pleasing "personalities," better "mental reactions," greater "social poise," were more "interested" during the interview, were more "responsive" to the interviewers' comments, and were better "organized." It is not, therefore, surprising that when overall evaluation is expanded from a simple "employ - not-employ" situation to include other ratings, PALS-trained subjects are likewise significantly higher than the "control" subjects. A sign test on the pattern of results shows that the probability of achieving the pattern of significant differences which appears in Table 2 by chance is less than 1 in one hundred. Clearly, PALS-training seems to enable its subjects to achieve high ratings on these interviewers rated characteristics. To the extent that these high ratings in the simulated job interview situation are indicative of ability to perform well in such situations in the real world. PALS training seems effective.

The apparent strength of the relationship between PALS training and successful performance in the simulated interview is attenuated because of two factors which are inherent in the design of this pilot evaluation. First, although the members of comparison group did not receive the PALS subjects (sex, grade, high school), we cannot be confident that the females in the comparison group are not different on some other important, but unmeasured, variable. Specifically, since self-selection seems such an important element in the PALS program, we cannot rule out the possibility that the factor which leads students to choose PALS is the same characteristic which contributes to their good performance. A more complex design is necessary to eliminate this possibility. Second, as was described above, we cannot rule out the possibility of contamination due to the ability, or supposed ability, of the interviewers to discriminate between PALS and non-PALS subjects. The failure of the "blind" condition raises a question about the ability of PALS trainees to perform well on criteria other than those provided by the program itself. The "clues" to PALS criteria may have introduced some bias into interviewers' selections for hiring. Whatever the direction of possible bias, a more sophisticated design is required to reduce the possibility of contamination from these factors.

Finally, the strength of the pattern which appears in Table 2 derives from the strength of the interrelationships among the interviewer ratings. There is no reason to believe that the ratings on "personal" characteristics are independent. The average product-moment correlation of the ratings on "personal" characteristics and overall evaluation is .674 and all ten of the correlation coefficients arestatistically significant. More research is required to isolate orthogonal dimensions in the rating situation and to compare PALS-trained and "control" groups on these dimensions. A preliminary examination, by means of linkage analysis, of the internal clusters in these data reveal three clusters of variables: (1) physical vigor, personality, mental reactions & voice; (2) dress and grooming, use of English and social poise; and (3) overall rating by interviewer, the level of subject interest and organization and the quality of his "feedback" to the interviewer. This analysis suggests that first, these clusters may be the orthogonal factors operating in the interview situation and, second, overall evaluation is more associated with PALS training than with social appearance items. More sophisticated analysis on a larger number of interviews is required to trace out these factors. Such analysis would yield clues to the operating dynamics in the interview situation which lead directly to "hiring" decisions and this information could be fed back into the training regimen of subjects.

In summary, to the extent that the interviewer ratings of applicants in a simulated job interview situation measure the effectiveness of PALS training and to the extent that the data generated here accurately reflect the process of job interviewing, we conclude PALS training does produce more effective performances in an employment situation. Within limits of the caveats entered above, the PALS program seems successful in meeting that part of its objective of preparing students for the world of work.

Subject rated interviewer behavior. Subjects were also asked to rate the performance of their interviewers during the test situation (see Appendix G). In addition to maintaining the experimental "cover," we hoped to determine whether PALS training increased subject sensitivity to the interview situation. However, no differences were discovered in the ratings given by subjects. (Data not presented.) We are reluctant to conclude that these no findings simply reflect lack of differential sensitivity among subjects. Other factors, such as the setting of the experiment and the way in which the subject ratings were collected may explain the lack of variance in their responses.

Observer rated interview behavior. A final measure of behavior during the simulated job interviews was obtained from observers who were placed in the interview room. These observers were asked to rate both interviewer and applicant on a number of PALS-related criteria (see Appendices E and F). The results of these ratings appear in Table 3.

The data in Table 3 reveal that in all instances of observer rating of subject-controlled behavior, PALS-trained students score significantly higher than do those students chosen as "control." PALS trained students have significantly more verbal responses and "attend" at a consistently higher rate throughout the interview situation. Only on those observer rated behaviors over which the interviewer had control, total number of verbal interactions and mean number of interviewer verbal responses, do no significant differences appear. This is what we would expect since we assumed that interviewer behavior would be standardized for PALS-trained and "control" subjects.

In terms of subject performance, observer ratings display a consistent and strong pattern of superiority of PALS-trained subjects. On the basis of these data, we conclude that PALS-training is effective in imparting the skills of "responding" and "attending."

TABLE 3

MEAN SCORES FOR PALS-TRAINED AND "CONTROL" GROUPS ON OBSERVER RATED BEHAVIORS

	Mean Scores for PALS-CAST	Mean Scores for CONTROL	DIFFERENCE	t
Number of Verbal Interactions During the Interview	14.08	12.18	1.90	NS
Number of Student Responses During Interview	2.08	1.51	.57	3.89**
Number of Interviewer Responses During Interview	1.97	2.16	-.19	NS
Rate of Student "Attending" During First Third of Interview	3.07	2.32	.75	2.08*
Rate of Student "Attending" During Second Third of Interview	3.03	2.36	.67	1.72*
Rate of Student "Attending" During Final Third of Interview	3.03	2.27	.76	2.07*
Mean Student "Attending" Rate During Interview	3.04	2.32	.72	2.01*

* Significant at .05

** Significant at .01

NS Not Significant

Background characteristics of PALS-trained and "control" groups.

With the permission of the Director of Student Guidance and Personnel of the Pontiac Public Schools, the cummulative records of the student subjects were examined and various data on background characteristics were coded. Table 4 presents a summary of these data for PALS-trained and "control" subjects.

TABLE 4

MEAN SCORES ON BACKGROUND VARIABLES FOR PALS-TRAINED AND "CONTROL" SUBJECTS

	Mean for PALS-Trained	Mean for "Control	Difference	t
MICHIGAN EDUCATIONAL ASSESSMENT				
M.E.A.P. Vocab Score	50.18	46.43	3.55	NS
M.E.A.P. Reading Score	52.64	46.71	7.07	NS
M.E.A.P. Math Score	45.55	45.57	-.02	NS
M.E.A.P. Comprehensive Achievement Score	49.60	46.57	3.03	NS
COMPREHENSIVE TEST OF BASIC SKILLS				
C.T.B.S. Reading Vocabulary Score	32.40	26.44	5.96	NS
C.T.B.S. Reading Comprehension Score	39.40	24.78	14.62	NS
C.T.B.S. Total Reading	22.67	21.22	1.45	1.77*
DIFFERENTIAL APTITUDE TEST				
D.A.T. - VR	35.00	35.14	-.14	NS
D.A.T. - NA	28.64	32.71	-4.07	NS
D.A.T. - VR+NA	29.09	36.00	-6.91	NS
D.A.T. - Abstract Reasoning	45.00	48.29	-3.29	NS
D.A.T. - Spatial Relationships	41.36	46.57	-5.21	NS
METROPOLITAN ACHIEVEMENT TEST				
M.A.T. - Total Reading	34.18	25.78	8.40	NS
M.A.T. - Total Math	36.18	30.44	5.74	NS
Grade 3 IQ	104.10	93.57	10.53	NS
Number Grades Father Completed	10.18	9.63	.55	NS
Number Grades Mother Completed	10.00	11.13	-1.13	NS
Mean GPA Last Term	2.82	2.30	.50	NS

* Significant at .05

NS Not Significant

It is clear from an examination of the data in Table 4 that there are no systematic differences between PALS-trained and "control" subjects which might explain the success of PALS-trained subjects. On only one of the several test scores available, the Comprehensive Test of Basic Skills Total Reading, is significant difference observed; no differences worth noting appear between PALS-trained and "control" subjects in terms of GPA, IQ or parents' education. We have reason, therefore, to believe that differences in performance can better be accounted for by PALS-training than by other variables. Of course, in this analysis, only bivariate statistics were computed. The extremely small number precluded multivariate tests which would have enabled the testing of the importance of second-order effects.

PALS-related behavior and "hiring" of subjects

The data presented above demonstrate that the PALS program seems to effectively train its subjects in the appreciation of particular skills. A final question is what relationship exists between these skills and the decision to employ.

The measured PALS criteria seem to discriminate between "hired" and non-"hired" groups. Table 5 presents the comparisons between the two groups. Inspection reveals that those subjects who were "hired" responded at a significantly higher level than those who were not "hired." Therefore, it seems that the ability of the subject to demonstrate her understanding of what the interviewer is saying is a factor in successful performance.

TABLE 5

COMPARISON BETWEEN "HIRED" AND NOT-"HIRED" GROUPS ON PALS-RELATED CRITERIA

	"HIRED"	"NOT HIRED"	DIFF.	t
MEAN "RESPONDING" RATING OF SUBJECTS	2.11	1.59	.52	9.83 t .9995-3.82
MEAN "ATTENDING" RATING OF SUBJECTS	3.12	2.58	.54	3.58 t .995=2.83

Likewise, the average "attending" rating of those subjects who were judged employable by the interviewers is significantly higher than the average of those who failed to impress the employers in the simulated interview. On the basis of these data it would seem that the skills involved in paying attention during the interview do make a difference in the job seeking arena.

We conclude that the PALS program is justified in stressing the skills of "responding" and "attending" since both these behaviors seem to make a significant difference in discriminating between levels of success in this pilot evaluation. The strength of our findings, however, must be tempered by our reliance on the simple comparisons dictated by an extremely small n. More conclusive results require a more complex design.

Conclusions

Our pilot evaluation leads us to several conclusions which shall be presented in this final section.

1. The simulated job interview seems to be a workable procedure for producing a global evaluation of the performance of subjects as well as for providing an arena in which more subtle measures can be collected. The interviewers and the subjects seemed comfortable operating in this setting and no adverse reactions were detected. The presence of an observer during the interview enabled us to collect observational data which can be related to the attitudinal data provided by both subject and interviewer and seemed to impose no serious burden upon the interview process itself. Analysis of dat on interviewer performance indicates that professional personnel interviewers do, by and large, standardize behavior with respect to various sub-groups of subjects. By using such personnel, it would seem possible to present the subject with a relatively constant situation and, thereby, to minimize interviewer effects. Of course, with a larger n, such effects could be tested more systematically. In our pilot evaluation, such a test was not feasible. Another reservation involves the use of rating scales based upon PALS criteria by the interviewer since exposure to such scales may alert the rater to "fingerprints" of PALS trainees and, thus, contaminate the results.

2. PALS seems to be stressing criteria which are relevant to successful performance in an employment-seeking situation. Despite the fact that interviewers used their standard criteria in arriving at a final decision to "hire" or not-to-"hire" the applicant, both PALS-related criteria seem good predictors of success. "Responding" and "attending," as defined by the PALS program and as measured by both interviewers and observers seem to discriminate between successful (high-rated) and unsuccessful (low-rated) subjects.

3. PALS seems to be effective in tracking interpersonal skills to its trainees. PALS trainees out perform "controls" not only in PALS-related variables but also on dimensions appearing on standard interviewer forms.

As mentioned above, however, the absence of a control group in the strict sense prohibits us from saying conclusively that PALS produces this result. We cannot rule out the possibility that high "responders" and "attenders" volunteer for PALS training. Only a design which randomly assigns PALS volunteers to different treatments would allow a strong conclusion about PALS effectiveness. However, an examination of several background characteristics failed to disclose any systematic differences between PALS and "control" groups.

4. The generally favorable tone of this evaluation must be tempered by the realization that only two aspects of a very complex program have been addressed, "responding" and "attending." Future evaluations should attempt to deal with other aspects of this program.

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Other Questions

Questions other than those stated as objectives were raised and attempts were made to address them. However, insufficient data and/or lack of proper instrumentation made the results of this facet of the research highly suspect in terms of statistically significant results. However, the issues raised by attempting to research these questions lay a base for the possibility of further research implications.

Question One

Is there a relationship between teacher communication skills level and student achievement?

Correlations were calculated in order to determine if a relationship exists between the human interpersonal skills (measured by the paper/pencil test) and the student performance. A portion of the teacher selection inventory was used to measure these human skills.

Teacher Communication Post N= 6

mean - 41.77 S.D. - 3.77
vs. r= -0.29

Student Post Test

mean - 30.13 S.D. = 3.04

Question Two

Is there a relationship between teacher educational skill level and student achievement?

In terms of the teacher performance on the educational achievement test, the relationship is negative.

Teacher Education Skill Level N= 6

mean - 154.0 S.D. = 48.56
vs. r- -0.30

Student Post Test

mean - 30.13 S.D. = 3.04

Question Three

Is there a relationship between teacher performance of career skills and student performance of the same skills?

In order to establish the relationshop between teacher knowledge of the curriculum and student achievement the teachers were given the identical test.

The test covered the three major curriculum areas, expanding, narrowing and preparing. Correlations were run between this teacher data and equivalent student data. For an n=6, df=4 a value of .81 is required for significance at the .05 level.

CAREER ACHIEVEMENT SKILLS

	Expanding		Narrowing		Preparing		Total	
	Teacher	Student	Teacher	Student	Teacher	Student	Teacher	Student
Mean	14.33	11.05	12.83	11.52	10.33	7.15	37.33	30.13
S.D.	.51	1.40	4.83	1.43	3.93	2.72	7.76	3.04
r	0.85		-0.24		.74		0.43	

Examination of the data reveals a high positive correlation between student and teacher performance in expanding (r=.85), and in preparing skills (r=.74) while a low negative correlation in narrowing skills (r= -0.24). However, the small standard deviations in each of these 3 sets of data indicate that the variation within teacher scores is very low. Therefore, correlations derived from this data can easily be misleading and must be used and interpreted cautiously. Therefore, although the former data suggest some correlation, the data derived from the total does not support the assumption that student performance is related to teacher performance.

Question Four

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Is there a relationship between the teacher observation score during one teacher observation and total student outcome?

For the six teachers who administered the post-test, and for whom we have teacher observation data, a comparison was made between the level of teacher performance and student level. Teachers were analyzed by grouping them into categories high and low. If they were in the upper 50% in an area, they were considered high, if in the lower 50% they were considered low. The students were then analyzed using a similar criteria. If more than 50% achieved an acceptable score, they were considered high. From that data, a 2 x 2 matrix was constructed to determine if a relationship exists.

Teacher Observation Scores

vs.

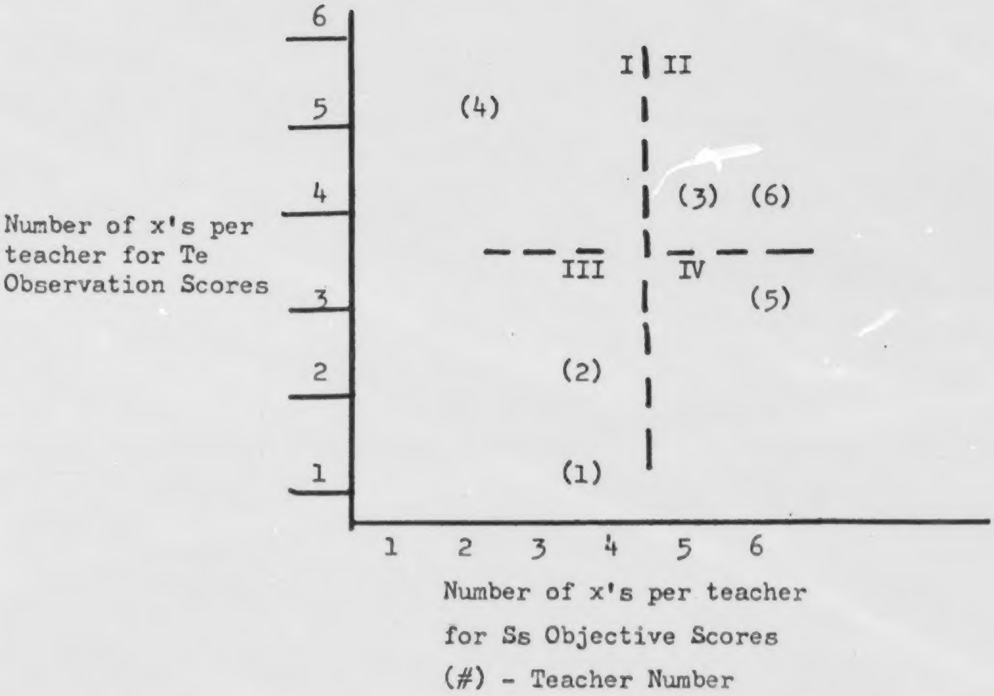
Student Performance

Teacher	Te Observation, Upper 50% Scores per Area							Ss Objectives, Upper 50% Scores per Objective								
	Observation Area							Objective Number								
	1	2	3	4	5	6		1	2	3	4	5	6	7	8	9
1				x				x			x	(x)	x			
2	x				x			x			x	(x)	x			
3	x	x	(x)			x					x	(x)	x	x		
4		x	(x)	x	x	x			x	x						x
5		x	x			x		x	x	x				x	x	x
6	x		x	x	x				x	x		x		x	x	x

( ) - Imply tie in score value

x - An x placed in matrix for upper ½ scores for each column.

Six observation areas were considered. Where the teacher scored high, an X was placed in that cell. Where the students rated high on an objective, an X was placed in that cell. The total number of X's for the teacher and student was determined and plotted on the below 2 x 2 matrix. The numbers on the chart are the teacher numbers corresponding to the above chart.



Quadrant I - High Performing Teacher, Low Performing Students
II - High Performing Teacher, High Performing Students
III - Low Performing Teacher, Low Performing Students
IV - Low Performing Teacher, High Performing Students

Using the Davidoff-Goheen estimate of the tetrachloric correlation from the a/cc relations indicate that there is a zero (0.0) correlation between student and teacher behavior. A PHI coefficient results in a r of .33. With an n=6, a value of .73 is required to show significance at the 90% confident level. However, the fact that the teacher data was collected during only one observation on an instrument whose reliability has not been completely established makes useful interpretation of this data unlikely. (See Evaluation, Section 9) Therefore, it can be said that the data does not support the hypothesis that teacher level, as determined by the observation instrument, is in any way related to student outcome or performance.

Phase II - Objective Six

In Phase II of the CAST project Al Pavlish from the Pontiac Research and Development Department made an attempt to computerize the CAST skills so that a student could learn them using a computer mode as well as from a personal mode.

Because the curriculum was still in the early developmental stages, the program could not be completed.

However, because much time and effort was devoted to developing this computer program, a description of the program and results are included in this Phase III Final Report.

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Phase II Objective Six

Computerized Curriculum

In keeping with the goals of the project, a study was made during Phase II to determine if, at that time, it was advisable to undertake a concerted effort in computerizing all or part of the CAST program. It is being reported at this time because the research was incomplete at the end of Phase II.

First, an assessment was made to determine if the CAST curriculum developed was advanced to the level where the components of the various skills were delineated and sequenced to a level of certainty high enough to justify the programming effort. Secondly, an evaluation was made to determine which of two available languages would be better suited for the computer assisted instruction (CAI) programming task. Thirdly, two high school students were hired and trained to begin to program where possible the "Expanding and Narrowing" skills. (The first two chapters in the CAST program). In their programming attempts, the students used the following resources:

a. A local 2741 terminal which was remotely connected to a 360/50 computer at the Oakland Intermediate School District Office.

b. The language - ITF (an IBM version of BASIC) and Coursewriter which were available on the local 2741 terminal.

c. CAST Curriculum

From past experience, it seemed desirable not to use the slow typewriter terminal (IBM 2741) but rather a CRT (cathode ray tube) which is currently available from IBM. It can display at a much higher rate and also superimpose images. Unfortunately, in order to have this equipment available, an extensive and expensive hardware modification would be required. Therefore, the much less desirable hardward had to be used.

The IBM remote system has two languages available - ITF and Coursewriter. In order to properly assess which would serve the requirement best, the CAST curriculum was programmed in both by students trained in both languages. (Both languages have their advantages and disadvantages, neither of which really served the programming function well.)

Using the existing curriculum, parts of the first two chapters of "Expanding and Narriowing" were programmed. Several groups of people - students, teachers, etc., investigated the programmed materials. The general conclusion reached by them was that the computer could probably deliver what was programmed effectively; however, due to the developmental nature of the curriculum, it was determined the computer delivery should cease until the curriculum and human delivery system is more complete in its design and development.

At this time it is recommended that no further attempt be made to computerize the first two chapters in the Career Achievement Skills Training program until a well defined human system if operable.

The following may be found in the referred areas:

a sample Computer Output (Appendix P)
copies of the Coursewriter (Appendix Q)
BASIC Programs (Appendix R) and
a Terminal Usage Program (Appendix S)

Outcomes and Recommendations

Students Selected

Students should have been randomly selected for the experimental classes rather than being selected because they were convenient. This would have insured an even distribution of the population between the experimental classes.

Control groups could have been used had there been a comparable group who was receiving a career education program that was addressing the same objectives as CAST.

Students in Phase II should have been followed up in Phase III and when possible should have received CAST instruction a second year.

More students representing all grade levels should have been included in the project. This would have meant increasing the teacher (n) which is highly recommended for statistical purposes. Having more teachers and a wider range of students would have provided more information to use in comparing the growth of students on the CAST skills from grade level to grade level.

Instruments

The modular tests were good for review purposes but were very time consuming. It is recommended that the tests be used simply for review (to take home) and the students given the answer sheets to check their own responses.

The summary question was an attempt to have the students apply what they learned in developing a career plan. Because it was a free response item, the scoring was somewhat difficult. It is recommended that a testing procedure be developed which evaluates student learning as it relates to a practical application of the skills being taught. This might involve an interview, observation and/or paper and pencil measurement. Using a paper and pencil test alone does not measure adequately all the skills the students have learned.

Discussion of Data

Elementary students can learn career achievement skills if they are simplified and presented in the context of their world. They do need daily reinforcement and a great deal of practice so that the skills become internalized. For example, decision-making skills could be taught to the early elementary students if the process were simplified, applied and reinforced in their day to day classroom decisions.

Junior High

CAST students outperformed non CAST students in developing a career plan. The areas where the teachers did not spend as much time or were not as confident in their understanding of the material, the students did not score as highly. This has implications for improving the CAST Inservice Training.

Teacher Selection Inventories

The teacher selection inventories are a good initial assessment of teacher effectiveness, but should be used along with an interview or observation of teacher performance to insure the most accurate selection. Also, the scoring criteria on the educational assessment instrument needs to be spelled out more specifically.

Observational Checklist

The observational checklist was appropriate for teacher diagnosis and feedback, but needs refinement so that it will yield more reliable data and can be used for evaluation purposes. Once the skills are defined more specifically, then impartial observers need to be trained more systematically on how to use it. Also, repeated measures need to be made during the year and related to the objective being delivered. Also, a control group of teachers needs to be included so that a comparison can be made between those who have been trained and those who have not.

From both the paper and pencil inventories and the classroom observations, it can be concluded that CAST teachers did acquire the skills they were taught.

Objective Four

CAST trainers adequately delivered the human,education and career skills in all but two areas - program development and learning strategies.

CAST trainers reported additional skill growth between the end of the summer training and the end of the project.

Therefore, it can be concluded that the trainers could train best those skills that they could perform best.

Curriculum

CAST participants felt that the Phase II Lesson Plan Manual was best used as a training tool with the teachers and counselors developing their own delivery lessons. Teachers and counselors did feel that a Phase III Lesson Plan Manual would be helpful if it were to provide additional training strategies and methods.

It is recommended that the curriculum be monitored more closely in terms of assessing what methods and strategies deliver which objective best in what time period.

PALS

Students using the CAST skills at the high school level have a 90% greater chance of being hired than students not using the skills.

All of these conclusions substantiate the fact that the CAST program did deliver skills to students, teachers-counselors and trainers which have made a difference in their effectiveness.

MAJOR FINDINGS

This section includes the following:

1. Summary of the major findings of Phase III
2. Application of these findings for other projects
3. Implications of these findings for further research

Summary

The following are major conclusions drawn from the CAST program.

Students

Elementary students can learn the career achievement skills.

CAST junior high students significantly outperformed non CAST students in developing a career plan.

High school students trained in the CAST skills and human skills stand a 90% greater chance of being hired for a job than non CAST students.

Training

Teachers and counselors trained by CAST trainers did show significant gains in the human and educational skills from pre test to post test.

Classroom observations, individual teacher programs and evening followup sessions did increase teacher level of functioning over the course of the year.

All teachers felt that the inservice training was necessary to deliver all or part of CAST.

Curriculum Development and Delivery

Over 75% of the teachers felt that the curriculum was better than the traditional materials in terms of student learning.

Approximately 77% of the teachers felt that the best way to deliver CAST was using the lesson plan manual and the comic book - The Story of Who (Carkhuff 1974) together.

Ninety-nine percent of all teachers felt that CAST could be integrated into the existing curriculum.

CAOS

Students using CAOS can complete the instrument in one-fourth the time that students using the non computerized version of Dr. John Holland's "Self-Directed Search".

Applications

The following statements are suggested applications of the CAST program.

Students

If students are taught to transfer the CAST skills into other areas of their lives, then they will see the universal application of the skills so that they can use the skills in all the aspects of their lives - Living, Learning and Working.

If CAST students are trained as interns to teach other students the CAST skills, then the CAST students will be held responsible for anothers' learning and, therefore, insure that they have mastered the skills.

Training

If parents are trained in the CAST skills, then they will understand what skills their children are learning so that they can help them learn and apply the skills.

If employers are trained in the CAST skills, then they will understand the preparation their interns have had and will be better able to plan a meaningful internship experience.

If retired people can be trained to assist in the CAST program, then they will be able to share their experinces and skills with the CAST students so that the students will have older adult models to which they can relate.

If the inservice training model is adopted by the school district, then it can serve as the staff development delivery system model, so that benefits from all special programs can be disseminated to all school district staff.

Internships

If the internship program can be coordinated with existing vocational programs, then students will be better able to choose systematically their vocational placement so that it leads towards their larger career goal.

If internships can be leveled according to length and depth and sequenced to provide increasing degrees of independence, then students will move through a series of experiences which meet their individual needs so that they can be successful each step of the way.

If a transportation system can be developed and supported in conjunction with local business and industry, then the community would have an investment in the program so that the students would be provided with the greatest number of experiences possible.

Curriculum Development and Delivery

If a K-12 curriculum is implemented from the existing lesson plan manuals and comic books then students would progress through a series of planned career steps which would insure their acquiring the skills at increasing levels of sophistication.

If the CAST curriculum is integrated with the existing curriculum, then the students will see the relationship between the career skills and their content skills so that they will begin to transfer the CAST skills into all areas of their learning.

CAOS

If CAOS is further developed by counselors and integrated with existing career sources and value exploration exercises, then it will be more meaningful for the students so that they can use it to generate as much information about themselves as possible.

Implications

The following statements are implications for further research.

Students

The affective areas of student learning related to career decision-making and self-exploration need to be further defined.

Teachers

The effects of different teacher delivery systems on student learning needs to be addressed.

The breadth and depth of training necessary for a successful CAST program needs to be determined.

Internships

The length, breadth, nature, and value of the internship to students' self and career exploration needs to be further defined.

Parents

The influence of parents on the students' decision-making process needs to be addressed.

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TEACHING SKILLS DIAGNOSTIC CHECKLIST

APPENDIX A

Rater: Date: Time: to

Teacher's Name: Grade Level: Subject:

Goal of Lesson:

Level	Skills	R	O	P	E	S
	Time					
	A. Methodology					
1.0	T Tell					
2.0	TS Tell & Show					
3.0	TD Tell & Student Do					
4.0	SD Show & Student Do					
5.0	TSD Tell, Show & Student Do					
	Summary					
	B. Content Develop.					
1.0	F Facts					
2.0	C Concepts					
3.0	P Principle - If - Then					
4.0	S Skill - Observable - Measurable					
5.0	Think Step					
	Summary					
	C. Strategies					
1.0	None					
2.0	Memory - Recall					
3.0	E Exploration - Analyze					
4.0	U Understanding - Relate					
5.0	A Action - Problem Solving					
	Summary					
	D. Attending					
1.0	No Eye Contact - not square					
2.0	Eyes not square - not close - no lean					
3.0	Eyes not square - 13-15 ft. - lean forward					
4.0	Eyes not square - 12 ft. - lean forward					
5.0	Eyes square - close enough to touch - lean forward					
	Summary					
	E. Responding					
1.0	No feeling or content					
2.0	Content					
3.0	Feeling & Content					
4.0	Goal					
5.0	Program					
	Summary					
	F. Reinforcement					
1.0	0 Neutral					
2.0	- 0 Negative & Neutral					
3.0	+ Positive					
4.0	+0 Positive & Neutral					
5.0	+-0 Positive - Negative - Neutral					
	Summary					
	. Class Management					
	D O P C L					

NOTES

Strongest Area:

Area Just Below 3:

Goal:

Program:

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APPENDIX B

CAREER ACHIEVEMENT SKILLS TRAINING*

TEACHER'S MANUAL

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FOREWORD

The Career Achievement Skills Training program was delivered during the 1972-73 School year to representative Pontiac City School students from Grades 2-12. As a result of the first delivery many refinements were made. This Teachers' Manual is the result of having "taken out the bugs". Although, we are sure that many "bugs" remain, every attempt has been made to structure the manual in such a way that it will be informative and useful to teachers who are delivering CAST.

The narrative section of the manual explains the function of each of the Operational parts of the manual and makes suggestions for the most efficient and productive delivery of the CAST program.

The operational part of the manual is a step-by-step program for both teacher and student performance which leads to mastery of the stated objectives.

CAST GOALS AND OBJECTIVES

The following is a list of goals and objectives, by Module, for the CAST Program. Time allotment suggestions by objective and module and appropriate "think steps" for student use are included.

MODULE I - 4 hours

GOAL 1.0 EXPANDING JOB TITLES TO CHOOSE FROM USING THE INTERROGATIVE WHAT AND WHO.

P.O. 1.1 (1 hr.) Given a list of at least ten verbs which he has generated in response to the question, "What do people do?" the learner will supply at least two job titles for each verb in response to the question, "Who _(verb)___?" using the format, "A _(job title)_ _(verb)_".

Think Steps:

1. Do I have 10 words and does each of the words describe something a person does?
2. Do I have two answers to every question?

GOAL 2.0 EXPANDING AND CLASSIFYING JOBS UNDER HEADINGS OF PEOPLE OR THINGS ON THE BASIS OF WHAT PEOPLE DO.

P.O. 2.1 (1 hr.) Given at least 20 jobs which he has generated, the learner will classify these 20 jobs into the categories of People Job or Thing Job, and will increase the number in each category to at least 20 jobs.

Think Steps:

1. Do the jobs under People Jobs require spending more time with and for people?
2. Do the jobs under Thing Jobs require spending more time with things?
3. Do I have at least 20 jobs under each heading?

GOAL 3.0 EXPAND AND CLASSIFY JOBS BY INTEREST AREAS FOR BOTH PEOPLE AND THING JOBS

P.O. 3.1 Using four interest areas within the People category, the learner will classify at least 20 people
(1 hr.) jobs and increase the number within each interest area to at least five jobs.

Think Steps:

1. Do the jobs under each interest area require the type of work described for each interest area?
2. Do I have at least five jobs in each interest area?

P.O. 3.2 Using four interest areas within the Thing category, the learner will classify at least 20 thing
(1 hr.) jobs and increase the number within each interest area to at least five jobs.

Think Steps:

1. Do the jobs in each interest area require the type of work described for each interest area?
2. Do I have at least five jobs in each interest area?

MODULE II - 2½ hours

GOAL 4.0 EXPAND JOB AWARENESS BY CLASSIFYING JOBS IN ONE OR MORE OF EIGHT INTEREST AREAS ACCORDING TO EDUCATIONAL LEVELS.

P.O. 4.1 Given the eight interest areas under People and Things, the learner will use numbers to indicate his
(1½ hrs.) relative interests and make a statement concerning his interpretation of the results.

Think Steps:

1. Do the numbers I have assigned show how interested I would be in each interest area?
2. If someone else looked at my paper, could they tell me my interests in order from high to low?

P.O. 4.2 Using the job titles from his interest area lists, the learner will classify these job titles on a
(1 hr.) matrix in terms of five educational levels.

Think Steps:

1. If a person had the level of education described here, could he get the job I have placed on my Chart?

GOAL 5.0 CHOOSING A LIMITED SET OF OCCUPATIONS TO EXPLORE

P.O. 5.1 The learner will use numbers to indicate his relative desire for educational attainment and will
(½ hr.) make a statement concerning his interpretation of his numbers.

Think Steps:

1. Do the numbers on my chart show someone else which levels of education I desire most and least?

P.O. 5.2 Given a matrix based on the dimensions of educational level and interest areas, the learner will
(½ hr.) use multiplication to determine his favored cell and will make a written statement concerning his interpretation of the matrix.

Think Steps:

1. Would people who have the jobs in my favored cell have interests and educational desires the same as mine?

MODULE III - 4 hours

GOAL 6.0 DEVELOPING AWARENESS OF JOB INFORMATION SOURCES

P.O. 6.1 Given the categories of People and Things, the learner will list at least five general information
(1 hr.) sources for each category.

Think Steps:

1. Can I list at least five sources of information?

P.O. 6.2 Using his chart from P.O. 5.2 and his information sources from P.O. 6.1, the learner will complete
(2 hrs.) the chart with at least two job titles in each cell.

Think Steps:

1. Does my chart have at least two job titles in each cell?

P.O. 6.3 Using the information sources in P.O. 6.1, the learner will locate and list the names of at least
(1 hr.) four specific information sources that can give him information about at least two of the jobs in his favored occupation cell on his job chart.

Think Steps:

1. If I wanted to find specific information about each of my two jobs, would each of the sources I have listed be able to supply it?

MODULE IV - 8 hours

GOAL 7.0 DEVELOPING AND USING QUESTIONS TO OBTAIN INFORMATION ABOUT JOBS

P.O. 7.1 The learner will classify and expand job requirements using the headings: physical, intellectual,
(2 hrs.) and emotional.

Think Steps:

1. Do the requirements under physical relate to the body?
2. Do the requirements under intellectual relate to using the mind?
3. Do the requirements under emotional relate to feelings and attitudes?

P.O. 7.2 The learner will quantify each of the job requirements and will develop a question for each of the
(2 hrs.) definitions which is Physical, Intellectual and Emotional.

Think Steps:

1. Could someone observe and measure each of the quantified job requirements I have listed?

P.O. 7.3 Given six basic questions about a job, the learner will expand each question to three by adding the
(1 hr.) words Physically, Intellectually, and Emotionally to each job question.

Think Steps:

1. Do I have six questions that end in each of the three given terms?

P.O. 7.4 Given the 18 questions from P.O. 7.3 and the seven sources from P.O. 6.3, the learner will use his
(3 hrs.) sources to supply at least one quantified answer for each of his 18 questions for each of his job
alternatives.

Think Steps:

1. Do I have 18 answers for each job alternative?
2. Is each of my answers stated so that it could be observed and measured?

MODULE V - 3½ hours

GOAL 8.0 CLARIFY AND IDENTIFY OCCUPATIONAL VALUES P.I.E. (WHAT'S IMPORTANT TO ME).

P.O. 8.1 Given the categories Physical, Intellectual and Emotional, the learner will state at least three
(1 hr.) occupational values of his choice which relate to each category and define each in terms of quantity.

Think Steps:

1. Do I have 3 physical, 3 intellectual and 3 emotional values?
2. Is each one defined in terms of quantity?
3. Is each one something I want from a job?

GOAL 9.0 ORDERING OF OCCUPATIONAL VALUES

P.O. 9.1 Given his occupational values, the learner will use numbers to indicate their relative importance
(½ hr.) to him.

Think Steps:

1. If someone else looked at my numbers, would he know what is important to me?

GOAL 10.0 EVALUATION OF JOB BASED ON PERSONAL OCCUPATIONAL VALUES

P.O. 10.1 (½ hr.) Given his job information from P.O. 7.3, his weighted occupational values from P.O. 9.1, and a scale to represent favorability, the learner will compare each value with what each job has to offer in terms of that value and assign favorability signs for each job alternative.

Think Steps:

1. Does each of my favorability signs tell how closely the job would fit each of my occupational values?
2. If someone else looked at my chart, could he describe how well the job matches my values?

P.O. 10.2 (½ hr.) Given the information from P.O. 10.1, the learner will use addition or subtraction to determine a number which represents a score for each job related value and determine a job (total) score for each of his job alternatives.

Think Steps:

1. Did I use addition and subtraction?
2. Do I have a job score for each of my jobs?

P.O. 10.3 (½ hr.) Given his weighted values and a symbol for optimum favorability, the learner will use addition to determine his ideal job score.

Think Steps:

1. Is the number for my ideal job score twice as big as the number I would get if I added up all of my value weights?

P.O. 10.4 Using his ideal job score from P.O. 10.3 and each of his job scores from P.O. 10.2, the learner
(½ hr.) will use division and multiplication to show which of his job scores most nearly approaches his ideal job score and will make a written statement to that effect.

Think Steps:

1. Is the percentage for my job that I stated as my first choice greater than the percentage for my other job?

MODULE VI - 7 hours

GOAL 11.0 IDENTIFYING SPECIFIC SKILLS THROUGH PERSONAL INTERVIEW

P.O. 11.1 The learner will identify and contact a person with the learner's job alternative and make an
(2 hrs.) appointment for an interview.

Think Steps:

1. Did I identify and contact a person who can give me information?

P.O. 11.2 Through classroom simulation, the learner will practice attending and responding skills in
(2 hrs.) preparation for an "on-the-job" interview.

Think Steps:

1. Did I face the person squarely?
2. Did I look at his eyes?
3. Did I lean toward him?
4. Did my response statements match his statements in meaning?
5. Did my summary statement say in a few words everything he had told me?

P.O. 11.3 The learner will use a pre interview chart to develop pre interview programs.
(1 hr.)

Think Steps:

1. Does my chart have at least 3 statements in each cell?
2. Could someone else identify each of my statements as either physical, intellectual or emotional?

P.O. 11.4 Through a personal interview with someone "on-the'job", the learner will determine at least
(1 hr.) 3 skills that the person must perform by asking the questions, "What things do you do that I could learn to do at my age? How well does it have to be done? Why is it done?"

Think Steps:

1. Did I ask the questions I had practiced?
2. Did I get information about at least 3 skills?
3. Could I describe the skill to someone else?

MODULE VII - 3½ hours

GOAL 12.0 EVALUATION OF ONESELF IN RELATION TO THE JOB REQUIREMENTS

P.O. 12.1 Using the numbers 1,2 and 3, the learner will evaluate himself on each of the job skills described during his interview and identify the skill(s) in which he is deficient.
(½ hr.)

Think Steps:

1. If someone else looked at my chart, could they tell me which skills I can and cannot do?

GOAL 13.0 DEVELOP AND CARRY OUT PROGRAMS FOR ACQUIRING NEEDED OCCUPATIONAL SKILLS

P.O. 13.1 (1 hr.) Using the skills defined in P.O. 12.1 in which the learner is deficient, the learner will develop at least one skills' acquisition program which states what he wants to be able to do and the necessary sequential intermediate steps.

Think Steps:

1. Do I have at least 5 steps in my program?
2. Is the first step to observe someone doing the skill?
3. Is the last step a description of the skill?
4. Are all of the in between steps necessary, in that order, to the performance of the skill?

P.O. 13.2 (1 hr.) Using the program developed in P.O. 13.1, the learner will practice each step of the program until he can perform the skill.

Think Steps:

1. Can I do each step of my program?
2. Can I do the skill (last step in my program)?
3. If I were doing this skill on a job would my employer say I did it right?

GOAL 14.0 INVESTIGATE PRINCIPLES THAT RELATE PERFORMANCE TO GOALS TO HUMAN BENEFIT

P.O. 14.1 Using the format:

(1 hr.) If I can______________then I can__________so that I can__________, the learner will state at least one principle which is related to each of the three job skills that were defined in P.O. 11.2.

Think Steps:

1. Do I have a principle for each of my job skills?
2. Does each principle show how my skill is related to my goal and something that is beneficial for me or someone else?

MODULE VIII - 2 hours

GOAL 15.0 REEVALUATION OF JOB WITH REGARD TO NEW INFORMATION

P.O. 15.1 (1 Hr.) Using any new information which he has gained, the learner will redo the favorability scores for his job and will use addition and subtraction to re-evaluate his chosen job alternative.

Think Steps:

1. Is my new job score different from my old job score?
2. Can I explain how new information can change my job score?

P.O. 15.2 (1 hr.) The learner will use division and multiplication to compare his present job favorability score and initial job favorability score and make a statement concerning their relative favorability.

Think Steps:

1. Is my new job favorability score different from my old job favorability score?
2. Can I explain what the new and old job favorability scores can tell me about my job?

MODULE IX - 3 hours

GOAL 16.0 REEVALUATION OF OCCUPATION WITH REGARD TO CHANGE OF VALUES

P.O. 16.1 (½ hr.) The learner will increase his list of occupational values from P.O. 8.1 by at least one value and use numbers to indicate their relative importance to him, compute a new ideal job score and compare it to old ideal score.

Think Steps:

1. Do I have at least one more value than on my old list?
2. If someone else looked at my numbers, could he list my values in their order of importance to me?

P.O. 16.2 (½ hr.) Using his weighted values from P.O. 16.1 and the favorability scale, the learner will use addition and subtraction to determine a new job score for his first occupational alternative.

Think Steps:

1. Did I go through all the job score steps?
2. Does my job score equal the total of my weights and favorability signs?

P.O. 16.3 (1 hr.) Using the information from P.O. 10.4 for his first occupational alternative and the information from P.O. 16.1 and 16.2 regarding his re-evaluated first occupational alternative, the learner will use division to show the relative favorability of the job before and after the interview and observation and make a statement to that effect.

Think Steps:

1. Is there a change in my job favorability score?
2. Can I explain to someone else what caused the change and what it says about my job in terms of my values.

GOAL 17.0 INVESTIGATION OF JOB WITH REGARD TO PROMOTIONAL POSSIBILITIES

P.O. 17.1 Using at least 2 of his information sources from P.O. 6.3, the learner will determine
(1 hr.) at least two jobs which are promotionally related to his first occupational alternative.

Think Steps:

1. Do I have at least two jobs?
2. Are the two jobs I named jobs I could be promoted to from my first occupational alternative?

STUDENT PROCEDURE SHEET DESIGN

The student procedure sheet is designed for student use. It is suggested that these sheets be duplicated and given to the student as his program. It is also suggested that transparencies or large charts of each of the student programs be made and used as a visual aid and teaching tool.

NUMBERING SYSTEM

It is important to note the numbering system because it is used within the program as a code for teacher and student reference. Each objective under a particular goal begins with the number assigned to that goal and is followed by a digit to the right of the decimal point which indicates its sequence within the goal. The steps leading to mastery of each objective begin with the objective number and are coded by adding a digit in the second place to the right of the decimal point. The number in this place indicates the position of the step in the program sequence.

STUDENT PRINCIPLE

The student principle is a statement written in first person and designed to provide purpose and direction to the student by:

1. Answering the question "Why are we doing this?"
2. Showing a relationship of the steps and skills to where we are and where we want to go
3. Serving as a model for the student when he is asked in a later objective to write principles

The principle is based on the pattern, "If I can do the skill, then I can reach the goal, so that I can gain some human benefit".

The principles given here are meant to serve as models. The teacher is encouraged to improve them or have students develop their own.

FACTS AND CONCEPTS

Facts and concepts are labels or processes which must be understood before the student can do the skill. They may be terms which are esoteric to the CAST program or they may be terms which must be used to give the students directions.

The definitions given here may not be ver batim from Webster. The terms were defined in the simplest form possible and given meanings which are operational within the context of CAST. Each defined fact and concept is underlined in the Student Steps where it is introduced..

STUDENT PROCEDURE (DO STEPS)

The do steps for the student make up a program which will lead him to mastery of the Skill. The coding of these steps has already been described in the section, Numbering System. Each step involves an action on the part of the student.

STUDENT MATERIALS

Materials listed here are those which a student must have in order to do a step and should serve as a reminder to both student and teacher. If a certain material is used in more than one step, it will be listed next to the initial implementation step only. Students should be encouraged to add the names of any other materials that they find helpful for the performance of any given step.

TEACHER PROCEDURE SHEET DESIGN

The overall design of the teacher procedure sheet corresponds to the student procedure sheet.

GOAL STATEMENT

The goal statement is at the top of the teacher procedure sheet. It is a broad statement of desired student attainment and gives the teacher and student the overall aim of the antecedent objectives. The goals are numbered consecutively from 1.0 to 17.0.

PRINCIPLE

The teacher principle, broader in scope than the student principle, has been included beneath the Goal Statement. While the student principle is worded in first person, the teacher principle is written in second person as if the teacher were speaking to the student. It is based on the pattern, "If you can reach the goal, then you can reach a higher goal, so that you will give some human benefit." This principle should help the teacher keep in mind the reason that the goal was included and, when given to students, should help them to relate where they are to where they are going. The principle given here may be used as it reads or as a model for the teacher in developing principles that are meaningful to him/her in his particular teaching situation.

TEACHER MATERIALS

This is a very basic list of materials which are necessary for teacher performance and was included as a reminder for the teacher. It is not complete. The materials are listed by each teacher step. If a certain material is to be used throughout the lesson it is mentioned only once, next to its first implementation.

TEACHER PROCEDURE (TELL AND SHOW STEPS)

This is a program for teacher delivery that is necessary for student mastery of the objective. The numbers of each teacher step indicate the corresponding student step. It should be noted, however, that the teacher procedure is more loosely programmed than the student steps in that the teacher may have to take several steps before the students take one step. Therefore, several teacher steps may appear in one block on the chart.

The teacher activities included should be deemed as minimal and by no means are intended to be restrictive of teacher creativity or input. They are intended to structure an exercise in such a way as to include the tell, show and do elements of an effective delivery system.

NOTES AND EVALUATION

This section was designed for teacher input and program evaluation which can be used as feedback for necessary program revision.

DELIVERY SYSTEM

The student and teacher procedure sheets were designed to cover the Exercise Section of a complete lesson plan. A complete lesson plan is defined as one which has the following sections:

Review

Preview

Exercise

Practice

Summary

Each of the sections listed above is described in the following paragraphs.

REVIEW

This is the first step in each lesson and should be based largely on student in-put. The previous day's skill, the principle (student), the think step and the do steps for how yesterday's skill was accomplished should be included. The review may be audio (tell), visual (show) or kinesthetic (student performance)and should attempt to incorporate physical, intellectual, and emotional performance by students. The introduction of the teacher principle at this time may be an aid in relating yesterday's skill with today's skill and may help to relate all activities to the entire CAST program.

PREVIEW

This part of the lesson should show students the relationship between yesterday's skill and today's skill. It should state "Where we are" (present skill level) "Where we want to go". (today's skill). and "How we will get there". (The do steps for today's skill). (The presentation of the student principle for the new skill also tells us "Why we are learning the skill", and the think step tell students, "How I know I am doing it right").

The presentation of the preview can and should be varied from day to day, but should always incorporate tell, show and do methods.

EXERCISE

Each step in the exercise should be told and shown before the student does it. In this program, both student and teacher do steps have been outlined. The student do steps are essential to the mastery of the objective. The teacher steps are minimal and the teacher is encouraged to elaborate upon them to the degree that time, energy and creativity allow. However, the think steps for any addition should be, "Does the added teacher step tell and show better than the provided teacher step? Does the new teacher step make it easier for students to learn the student step?"

The last teacher step in any exercise should be giving the student a think step which will tell him how he knows if he has met the objective. This should include the same criteria which you will use for evaluation. Think steps for each objective are included in the list of objectives in section (8). These are minimal and are open to revision and addition but were added to give the teacher a basis on which to build.

PRACTICE

Once the student has completed the exercise, any additional performance of the steps leading to the skill will reinforce the program and increase the probability of his being able to perform the skill again. Most of the exercises have a "built in" practice in that the student must perform the basic process more than once to reach the objective. However, reinforcement may be further guaranteed, not only by the number of times, but also by the number of ways, i.e. physically, intellectually, emotionally, that the student experiences the skill. Therefore, each skill may be practiced by being certain that the student has had to do the skill, think about the skill and has expressed some sort of feeling about the skill.

SUMMARY

The summary is a short re-cap of the day's lesson. It tells "Where we were, Where we went and How we got there." Reference at this time to both the student principle and the teacher principle should help students to maintain an overview of their progress and direction. (See objectives).

LESSON PLAN PROGRAM

Review Program:

1. Show and tell yesterday's skill objective.
2. Show and tell steps which led to yesterday's (skill) objective.
3. Show and tell definitions of necessary facts and concepts.
4. Show and tell principle of yesterday's skill.
5. Show and tell think step for yesterday's skill.

PREVIEW PROGRAM

1. Show and tell objective for today's lesson.
2. Show and tell steps for reaching objective.
3. Show and tell principle of objective.

EXERCISE PROGRAM

1. Show and tell each step of program.
2. Have students do each step of program.
3. Give students think step for objective.

PRACTICE

1. Have students do the skill in as many ways and as many times as time allows.

SUMMARY

1. Show and tell where we were, where we are and how we got there.
2. Show and tell principle of skill.
3. Show and tell think step for skill.
4. Show and tell Teacher Principle from teacher procedure sheet.

A Teacher Self Evaluation Chart for Lesson Plans is included in the Appendix and is designed to serve as a checklist for evaluating your lesson plans.

CLASSROOM MANAGEMENT

Classroom management can be discussed in three separate but related areas:

Physical Management refers to such things as furniture arrangement, displays, location of materials, etc. It is difficult to make recommendations in this area because of the wide range of situations in which this program will be used. However, there are some basic principles which are suggested. All physical classroom elements should be suited to the needs of the learner in terms of quality and quantity, and should reflect the nature of the learner. The furniture should be arranged in such a way as to promote the mastery of the skill being learned. Also, the arrangement should promote easy access to the teacher or other resources. Bulletin Boards and other displays should reflect the interests and accomplishments of the learners as well as an overview of the CAST program. The student should be reminded constantly of Where he was, Where he is, and Where he is going.

Intellectual Management refers to the procedures and materials used to help students master the skill. These have partially been dealt with by the provision of a Delivery System and a Resource List. (See Appendix.) As you read through the student program steps, you will find that several of the steps are dependent upon skills and materials from previous steps. Therefore, it is essential that each student develop a folder in which he keeps his completed assignments in sequence. Based on the experience of the writers of this manual, it is highly recommended that the teacher, not the student, maintain possession of this folder in a location that is easily accessible to the student. Taking the folder home before the end of the program should be discouraged.

Emotional Management refers to the relationship between teacher and learner and the relationship between the learners themselves. The teacher is encouraged to attend and respond to the learners' feelings concerning the CAST program and his efforts toward mastery of the objectives. Where possible, it is suggested that the teacher teach and encourage her students to use attending and responding skills with one another.

EVALUATION

Two types of evaluation are suggested for use with the CAST program. A post test will be used to determine mastery and retention of each objective. The test questions appear in the Appendix. Suggested Test Result Charts for both student and teacher use appear respectively in the Appendix. However, since the exercises are based on the objective, completion of the exercise is verification of initial mastery of the objective. Therefore, a Teacher's progress chart of completed objectives will serve as one evaluative measure. (See Appendix.) Each exercise will be checked for number of steps completed and the number recorded in the proper cell on the Teacher's progress chart.

If given the proper "Think Step" for evaluation, students can check their own, or each other's exercises. This could be incorporated into the Summary section of the lesson plan.

It is suggested that a large progress chart identical to the teacher's copy be displayed in the room as a motivational and reinforcement tool.

It is also suggested that each student keep his own student progress chart (see Appendix) by checking or darkening the squares which represent completed steps.

SPECIAL NOTE TO TEACHERS OF CAST

At first glance at a program such as this, teachers will probably react in one of two ways. Some will be relieved to see their job spelled out so precisely. Others will be angry at the restrictions which this programming implies. Both groups of teachers are operating on the faulty assumption that what is written is the sum total of their responsibilities. Not so. The success of this entire program depends entirely upon the teacher as a resource person. In this light, Goal 11.0 is worthy of special comment.

In the literary sense, the personal contact and interview are the climax of the entire CAST program. All other goals in this program either lead toward or are based on Goal 11.0. Teacher preparation for student mastery of this objective within this goal will require many hours of telephone and leg work. Time co-ordination of these objectives will require imagination and flexibility as well as a high level of patience and persistence. The teacher, in a very real sense, becomes the students' major source of information and entrance to the World of Work.

It is very possible that completion of goal 11.0 will require as much as two to three weeks. Students' out-of-class as well as in-class activities must be monitored constantly. It is hoped that most students can carry out their objectives independently. However, since most of the interviews will be on school time, it will be the final responsibility of the teacher to arrange permission and insure transportation for each of his students. Each contact person should be notified in writing by the teacher in advance of the interview and given information concerning the desired nature of the interview. It is also desirable that the person be contacted following the interview and asked to evaluate the student's performance during the interview. (See Appendix)

The delivery of Goal 13.0, P.O. 13.2 is also demanding in terms of teacher performance. It is important that the student not only write but also has the experience of implementing his program for acquiring his chosen skill. Ideally, he should find someone who can teach him the skill, practice the skill and return to perform the skill on the job.

Those who have delivered this program can attest to the high degree of satisfaction felt by both students and teachers upon the completion of an actual on-the-job experience. Without this experience, the remainder of the program becomes routine and repetitive. So, as with most programs, the degree of student success will be related directly to the amount of effort that the teacher expends in operationalizing the implied, between-the-lines teacher activities. The skills which you have, use and are willing to give to your students are the virtual essence of education.

CAST STUDENT - TEACHER

PROCEDURE SHEETS

BEST COPY AVAILABLE

OBJECTIVE 1.1 GIVEN A LIST OF VERBS WHICH HE HAS GENERATED IN RESPONSE TO THE QUESTION "WHAT DO PEOPLE DO?", THE LEARNER WILL SUPPLY AT LEAST TWO JOBS FOR EACH VERB IN RESPONSE TO THE QUESTION "WHO (VERB)?"

RATIONALE: If I ask myself: "What do people do?" and "Who does it?" I will be able to think of many jobs so that I may further explore them.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE - (DO STEPS, EXERCISES, ETC)	MATERIALS
Verb - A word which describes action. Job title - Name of a job.	1.11 Read the question, "What do people do?"	
	1.12 List at least ten verbs which describe something a person does.	pencil paper
	1.13 Write a question for each of your verbs using, "Who (verb)?"	
	1.14 For each of the questions, write two answers "A (job title) (verb)."	

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P.O. 1.1 1.0 EXPANDING JOB TITLES TO CHOOSE FROM USING THE INTERROGATIVE WHAT AND WHO.

PRINCIPLE If you can think of many jobs, then you can explore them, so that you know about many job possibilities for you.

TIME MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATIO
Chalk, Chalkboard/ Transparency and overhead projector	1.11 Write on board or transparency the question, "What do people do?" Explain that asking the above question should help the student think of a large number of jobs.	
List of verbs indicating career activities	1.12 List about three activities that people do. (Verbs)	
	1.13 Explain that we now combine question word "Who" with each of our verbs. Write format, "Who (verb)?" for each of the verbs already listed at board.	
List of examples such as: Lifeguards swim, Coaches swim; Artists paint, Housepainters paint.	1.14 Ask students to write two answers to each of their "Who" questions. Write format: A (job title) (verb). Show at least two examples using the previously listed "Who" questions.	

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OBJECTIVE 2.1 THE LEARNER WILL CLASSIFY HIS 20 JOBS INTO THE CATEGORIES OF PEOPLE JOBS AND THING JOBS AND WIL
INCREASE THE NUMBER OF PEOPLE AND THING JOBS TO 20 EACH.

PRINCIPLE: If I can classify jobs under people jobs and thing jobs, it will help me to think of more jobs so th
I can continue to explore careers.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE - (DO STEPS, EXERCISES, ETC.)	MATERIALS
People job - a job which requires a worker to spend most of his time working with people.	2.11 Look at each of your 20 jobs.	List of 20 jobs from P.O. 1.1.
	2.12 List all of the jobs which require you to spend more time with people than with things under the heading People jobs.	People-Things Expansion Chart, penc paper, definition of People job.
Thing job - a job which requires a worker to spend most of his time working with things.	2.13 List all of the jobs which require you to spend more time with things than with people under the heading Thing job.	definition of Thing job
	2.14 Add more jobs to each list until you have at least 20 jobs under each heading.	

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P.O. 2.1 2.0 EXPANDING AND CLASSIFYING JOBS UNDER HEADINGS OF PEOPLE OR THINGS ON THE BASIS OF WHAT PEOPLE DO.

PRINCIPLE If you can think of more jobs, then you can explore more jobs, so that you can have a better chance of choosing a job that is right for you.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Chalk and Chalkboard/ Overhead and Transparency of People-Thing Expansion Chart	2.11 Instruct students to examine their list of jobs from P.O. 1.1. Brainstorm (ask for suggestions) for names of two headings that could be used to help classify all jobs. Suggest People jobs and Thing jobs. Write these two headings on the board or transparency.	
List of People Jobs. Use People-Thing Expansion Chart.	2.12 List under heading "People Job" at least two examples. Tell the think step i.e. A job that requires you to work with and for people most of the time.	
List of Thing jobs.	2.13 List under heading "Thing Job" at least two examples. Tell the think step: i.e. A job that requires a worker to spend most of his time working with things.	
	2.14 Tell students to list 20 additional jobs under each heading.	

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OBJECTIVE 3.1 USING FOUR INTEREST AREAS WITHIN THE PEOPLE CATEGORY, THE LEARNER WILL CLASSIFY AT LEAST 20 PEOPLE JOBS AND INCREASE THE NUMBER WITHIN EACH INTEREST AREA TO AT LEAST FIVE JOBS.

PRINCIPLE If I can classify people jobs by putting them in like interest areas, then I will be able to think of more jobs in those areas, so that I can continue my career exploration.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
	3.11 Read and listen to definition of interest area.	Definitions of interest areas.
Interest Area - Areas of jobs related to one another on the basis of what people like to do.	3.12 Read and listen to definition of first People interest area "Service".	
	3.13 Read list of People jobs.	List of People jobs from 2.22.
Service - Occupation in which one person helps another.	3.14 Identify all people jobs which belong in the first interest area and write them under the first interest area heading.	Pencil People Interest Areas Chart
Education - Occupation in which one person teaches or trains another.	3.15 Repeat steps two, three and four for each of the four people interest area.	
Business (Contact) - face to face business concerning one person attempting to persuade another.	3.16 Write additional job titles under each interest area heading until you have at least five in each category.	
Recreation - Occupation in which one person is responsible for providing leisure activity for others.		

3.0 EXPAND AND CLASSIFY JOBS BY INTERESTS AREAS FOR BOTH PEOPLE AND THING JOBS.

P.O. 3.1

PRINCIPLE If you can think of more jobs by interest area, then you can explore careers even further, so that you can use your interests to help you select an occupation.

TCHR MATERIALS	TEACHER PROCEDURE-TELL, SHOW, DO METHODS	NOTES & EVALUATION
Chalk and Chalkboard/ Transparency and Overhead/Handout sheet Definition	3.11 Write and state definition of interest area. 3.12 Write and state definition of first interest area "Service".	
Bulletin board/ Chalkboard/Transparency List of people jobs	3.13 Instruct student to look over list of people jobs from previous lesson. Show example of such list.	
Same as above plus specific list of examples.	3.14 Tell student to decide which people jobs belong under first interest area (service) and write them under that interest area heading. Write at least two examples.	
List of examples for each remaining interest area. Definitions.	3.15 Repeat second, third and fourth steps above for other interest areas: education, business, recreation.	
	3.16 Have students work together to come up with additional jobs for each interest area until they have at least five under each area.	

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OBJECTIVE 3.2 USING FOUR INTEREST AREAS WITHIN THE THING CATEGORY, THE LEARNER WILL CLASSIFY AT LEAST 20 THING JOBS AND INCREASE THE NUMBER WITHIN EACH INTEREST AREA TO AT LEAST FIVE.

PRINCIPLE If I can add jobs to each interest area, then I can expand the number of jobs that I know about, so that I will have more job possibilities to explore.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Business (Detail) - Occupations in which people organize information. Technology - Occupations involving the production, maintenance and transportation of goods. Outdoors - Occupations involving the care and preservation of natural resources, plants and animals. Science - Occupations which involve the use of research for the purpose of developing or verifying information.	3.21 Read and listen to the definition of first Thing interest area. [Business (Detail)].	Definitions of Interest areas.
	3.22 Read list of Thing jobs.	List of Thing jobs from Step 2.23.
	3.23 Identify of the Thing jobs those belonging in the first interest area and write them under the heading of the first interest area.	Thing Interest Areas Chart. Pencil
	3.24 Repeat steps two, three and four for each Thing interest area.	
	3.25 Write additional job titles under each interest area heading until you have at least five in each category.	

3.0 [illegible] AREAS FOR [illegible] AND THING JOBS.

PRINCIPLE If you can expand jobs by interest areas, then you are more likely to find jobs that fit your interests, so you will be happy with your chosen job.

TEACHING MATERIALS	TEACHER PROCEDURE - (TELL, SHOW, DO METHODS	NOTES & EVALUATION
Chalk and Board/ Transparency and Overhead/Handout sheet Definition of Business (Detail)	3.21 Write and state definition of first Thing interest area: Business (detail).	
Bulletin Board/ Chalkboard/ Transparency List of Thing jobs	3.22 Tell students to look over list of thing jobs from previous Step 2.23. Show example of list.	
Same as above plus specific list of examples Definitions	3.23 Tell students to decide, using their list of definitions, which Thing jobs belong under first interest area. Write or point out at least two examples.	
List of examples for each remaining interest area. Definitions	3.24 Repeat above three steps for the other interest areas: technology, outdoors, science.	
	3.25 Have students exchange job titles for each interest area until they have at least five under each area.	

OBJECTIVE 4.1 USING THE EIGHT INTEREST AREAS UNDER PEOPLE AND THINGS THE LEARNER WILL USE NUMBERS TO INDICATE HIS RELATIVE INTERESTS AND MAKE A STATEMENT CONCERNING HIS OWN WEIGHTS.

PRINCIPLE If I can state what kinds of jobs that I like and don't like, then I can limit the number of jobs that I want to explore so that I can study these jobs more completely.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC.)	MATERIALS
Weighting - Using numbers from one to ten to indicate personal preference.	4.11 Read and Review all interest areas definitions and examples.	Definitions and Examples of Charts fro 3.16 and 3.25.
	4.12 Listen to definition of weighting.	
Job Activities - Things which people do while they are working.	4.13 Assign a weight of ten to that interest area which has job activities you would enjoy most.	Pencil Paper
	4.14 Assign a weight of one to that interest area which has job activities which you would enjoy least.	
	4.15 Using numbers between one and ten assign other weights to the remaining interest areas in terms of how well you would enjoy job activities in each.	
	4.16 Make a statement concerning your highest and lowest interest areas, using the pattern sentence: A. I like (interest area) because people in this area (job activities). B. I don't like (interest area) because people in this area (job activities).	

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4.0 EXPAND JOB AWARENESS BY CLASSIFYING IN ONE OR MORE OF EIGHT INTERESTS AREAS ACCORDING TO EDUCATION LEVELS.

P.O. 4.1

PRINCIPLE If you can limit the number of jobs you want to explore, then you can study each job more completely, so that you have more information to use in deciding on a job.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Definitions of interest areas.	4.11 Tell students to look at lists developed during last two sessions. Review interest area definitions.	
Chalk and Board/ Transparency and Overhead/handout	4.12 Define weighting and write definition.	
Think of example or be yourself.	4.13 Show weight of ten next to an interest area as an example of what you might enjoy most.	
Think of example or be yourself.	4.14 Show a weight of one next to an interest area you might enjoy least.	
Think of example or be yourself.	4.15 Show weights using two through nine for the remaining interest areas.	
Two statement formats and prepared examples.	4.16 Tell students to use their definitions of various interest areas to fill in the end of the statements. Tell them to copy format and complete the two statements. Show an example by doing the pair of statements.	

OBJECTIVE 4.2 USING THE JOB TITLES FROM HIS INTEREST AREA LISTS, THE LEARNER WILL CLASSIFY THESE JOB TITLES ON A MATRIX IN TERMS OF FIVE EDUCATIONAL LEVELS AND EXPAND EACH INTEREST AREA TO A TOTAL OF TEN JOBS

PRINCIPLE If I can classify and expand jobs by educational level, then I can determine how much education jobs require, so that I can choose a job that best fits what I want.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Educational level - the amount of education or training a person has. 1. Less than high school. 2. High School diploma. 3. High School plus some training (Junior College, Trade School) 4. College degree (four years) 5. More than four years of college.	4.21 Read and listen to descriptions of educational levels.	
	4.22 Look at one job on your interest area list.	Students own interest area list from . . . P.O. 4.1.
	4.23 Look at provided Job Expansion Chart.	Job Expansion Charts with interest areas and educational levels shown.
	4.24 Place job in proper cell (square) on chart.	
	4.25 Repeat steps one through four until all of your jobs are on the chart in their proper cell (square).	
	4.26 Using your own list and other students' lists if necessary, write additional jobs on chart until you have at least ten jobs in each interest area.	

[illegible] 4.0 EXPAND JOB AWARENESS BY CLASSIFYING IN ONE OR MORE OF EIGHT INTEREST AREAS ACCORDING TO EDUCATIONAL LEVELS

P.C. 4.2

PRINCIPLE If you can determine how much education jobs require, then you can choose a job which requires the amount of education you want, so that you can plan for that education.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
	4.21 List the educational levels and describe each.	
	4.22 Give one job title as an example. Ask student to pick one job from his interest area list.	
Chart showing Educational Level on board or Transparency or handout	4.23 Ask students to look at chart and tell where your example should be placed.	
	4.24 Tell student to place his job from 4.22 in the proper cell on chart.	
	4.25 Tell students to place all their jobs from their interest area list on the chart.	
	4.26 Tell students to work together if necessary to fill in the other interest areas on the chart.	

OBJECTIVE 5.1 THE LEARNER WILL USE NUMBERS TO INDICATE HIS RELATIVE DESIRE FOR EDUCATIONAL ATTAINMENT AND WILL MAKE A STATEMENT CONCERNING HIS INTERPRETATION OF THE PROCESS.

PRINCIPLE If I can determine my preferred educational level, then I can choose a favorite group of occupations to explore so that I can concentrate on finding out more about fewer jobs.

VOCABULARY	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
FACTS & CONCEPTS	5.11 Review the five educational levels.	Chart from 4.26.
Review:	5.12 Look at the five educational levels on your Job Expansion Charts.	
Weight	5.13 Assign a weight of ten to the level you feel that you most want to attain.	Pencil
	5.14 Assign a weight of one to the level you would least like to attain.	
	5.15 Using numbers between one and ten assign weights to the other educational levels.	
	5.16 Make a statement concerning your highest and lowest weighted educational levels using the sentence: I want (level of education) because ______.	Paper

5.0 CHOOSING A LIMITED SET OF OCCUPATIONS TO EXPLORE.

P.O. 5.1

PRINCIPLE If you can choose a small group of occupations which you like, then you can find out more about each of these occupations, so that you can compare these jobs to one another.

TCHR MATERIALS	TEACHER PROCEDURE - TELL, SHOW, DO METHODS	NOTES & EVALUATION
Bulletin board charts or transparency from previous lesson.	5.11 Tell students to look at their Job Expansion Charts.	
	5.12 Review the five levels.	
	5.13 Review the concept weighting with numbers from one to ten. Show which educational level you favor most by assigning it a ten.	
	5.14 Show the level you would least like to attain by assigning a weight of one.	
	5.15 Using numbers from two through nine show the weights you would assign to the remaining three educational levels.	
Prepared statement and reasons.	5.16 Show two *statements concerning reason for having assigned ten and one to the specific educational levels.*	

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OBJECTIVE 5.2 THE LEARNER WILL USE MULTIPLICATION TO DETERMINE HIS FAVORED CELL OF OCCUPATIONS IN TERMS OF EDUCATIONAL LEVEL AND INTEREST AREA AND WILL MAKE AN INTERPRETIVE STATEMENT OF HIS RESULTS.

PRINCIPLE If I can choose my favorite group of occupations, then I will have fewer occupations of high interest to explore, so that I will be looking for information only about jobs I like.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Multiply (x)	5.21 Write down your weight for your first interest area.	Pencil Paper
Favored - best liked	5.22 Write down your weight for your first educational level.	Pencil Paper
	5.23 Multiply your number from step one by your number from step two.	
	5.24 Look at Job Expansion Chart (People and Things).	Chart from 4.26
	5.25 Write the answer to step three in the proper cell.	Chart from 4.26
	5.26 Repeat steps one through four until you have multiplied each interest area number by each educational level number and have an answer to place in each cell. (Note: Box provided for each number.)	
	5.27 Make a statement concerning the highest and lowest weighted cells on your chart, using the sentence: A. My favored cell of occupations is (educational level) in (interest area). B. My least favored cell of occupations is (educational level) in (interest area).	

5.0 CHOOSING A LIMITED SET OF OCCUPATIONS TO EXPLORE.

P.O. 5.2

PRINCIPLE If I study only those occupations in my favorite cell, then I can look for them in sources of information, so that I can study them in detail.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATI
Prepared example, Chart from P.O. 4.2, Chalk and Board/Overhead and Transparency/Bulletin Board.	5.21 Review with students what first interest area choice and weight was. Tell them to write and label it. All numbers should be ten. Show example.	
	5.22 Review what a first choice and weight for educational levels was, and have them write and label this number also. Show example. All students should have ten.	
	5.23 Multiply the two numbers together. Product should be 100.	
	5.24 Point out the Job Expansion Chart and the cell related to the above product (answer).	
	5.25 Write the answer (100) in the proper cell, for example, under service across from college. (Note: Box provided for each number.)	
	5.26 Show one additional example by multiplying the weight of a different interest area times the weight of a different educational level and place in the proper cell. This time the answer will likely be less than 100.	
Prepared statements.	5.27 Write statements concerning the highest and lowest numbered cells on the chart using format statements shown on student step 5.27.	

OBJECTIVE 6.1 USING THE CATEGORIES OF PEOPLE AND THINGS, THE LEARNER WILL LIST AT LEAST FIVE GENERAL INFORMATION SOURCES FOR EACH CATEGORY.

PRINCIPLE If I can use the categories People and Things, then I can think of many information sources, so that I can find information about my favorite jobs.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Source of information - Some place or someone that can provide answers to questions.	6.11 List at least five sources of information under the heading People Source.	Paper Pencil
People Source - Someone who can provide information.	6.12 List at least five sources of information under the heading Thing Source.	
Thing Source - Something which can provide information.	6.13 For each of the sources above, list at least one thing you might do to obtain information from that source by using the sentence: To get information from (source) I would __(verb)__.	

[illegible] 6.0 DEVELOPING AWARENESS OF JOB INFORMATION SOURCES.
P.O. 6.1

PRINCIPLE If you can think of many information sources, then you can locate these sources, so that you can find out more information about your favorite jobs.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Chalk and Board or Overhead and transparency or handout. Some sources i.e. Parents, Counselor, Teacher, Relatives, people on job, etc.	6.11 Write, "Sources of Information" as a heading. Beneath the heading show the two categories, "People Sources" and "Thing Sources". Brainstorming is a suggested activity. Teacher could act as a recorder writing suggestions under proper heading.	
Books, Pamphlets, Films, T.V., Newspaper, etc.	6.12 Have students complete their own list by requiring at least five sources in each category.	
Prepared statement, i.e. To get information from my counselor, I would make an appointment during school and state why I wanted the appointment.	6.13 Point out one source and make a statement using format from student step 6.13. Write statement as a model.	

OBJECTIVE 6.2 USING CHART FROM P.O. 5.2 AND HIS INFORMATION SOURCES FROM P.O. 6.1, THE LEARNER WILL COMPLETE THE CHART WITH AT LEAST TWO JOB TITLES IN EACH CELL.

PRINCIPLE: If I can use my information sources to complete my chart, I will be more familiar with job information sources so that I will be able to gain more career information.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Require - to demand.	6.21 Look at your Job Expansion Chart.	Chart from 4.26.
	6.22 Determine a cell where you have less than two job titles.	
	6.23 Using the interest area and educational level of the cell in Step 6.22, state the question, "What jobs are there in (interest area) that require (level of education)?"	
	6.24 Using your information sources from P.O. 6.1, answer your question by writing at least two job titles in the proper cell on your chart.	Information sources from P.O. 6.1.
	6.25 Repeat steps one through four until you have at least two job titles for each cell on your chart.	

6.0 DEVELOPING AWARENESS OF JOB INFORMATION SOURCES.

P.O. 6.2

PRINCIPLE If you can become familiar with sources of information about your job, then you can gain more career information, so that you can make better decisions.

TEACH MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Transparency of chart from 4.26.	6.21 Place chart on overhead.	
	6.22 Point to a cell which has less than two job titles.	
Definition of Require.	6.23 Discuss meaning of require. Write format of question on board or overhead. "What jobs are there in (interest area) that require (level of education).	
Occupational Outlook Handbook or other Source.	6.24 Using Occupational Outlook Handbook, find two jobs for your chosen cell and list them on transparency. Have students give other sources of information. List sources of information on board and have students copy. Have students review own list from P.O. 6.1.	
Library or other Resource facility.	6.25 Aid students on one to one basis with using information sources. Tell students that they may work in groups to get job titles.	

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OBJECTIVE 6.3 USING THE INFORMATION SOURCES FROM P.O. 6.1, THE LEARNER WILL LOCATE AND LIST THE NAMES OF FOUR SPECIFIC INFORMATION SOURCES WHICH CAN GIVE HIM INFORMATION ABOUT AT LEAST TWO OF THE JOBS IN HIS FAVORED OCCUPATIONAL CELL ON HIS JOB CHART.

PRINCIPLE: If I can locate and list specific information sources, then I will have better information sources, so that I can get better information about careers.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
	6.31 Locate your favored occupational cell on your Job Expansion Chart.	Job Expansion Chart from 6.25.
	6.32 Write the name of one of the jobs in your favored occupational cell.	Pencil Paper
	6.33 Using your general sources of information, find and write the names of at least four sources which can give you information about the job named in Step two, and identify what type of resource it is.	General Sources of Information from P.O. 6.1. Use handout if necessary.
	6.34 Repeat Steps one throught three for at least one more job in your favored occupational cell.	

6.0 DEVELOPING AWARENESS OF JOB INFORMATION SOURCES.

P.O. 6.3

PRINCIPLE — If you can locate better sources of information, then you can get more and better job information, so that you can make an even better job decision.

TCHR. MATERIALS	TEACHER PROCEDURE - TELL, SHOW, DO METHODS	NOTES & EVALUATIO
Transparency or large chart of job expansion from 6.25. Overhead, marking pencil	6.31 Choose a cell as an example and point to it on the transparency or chart.	
Chalk board Chalk	6.32 Write the name of a job title from this cell on the board.	
Hand out list of at least seven resources which can give specific information about the job in step two.	6.33 Under job title, write and say the names or titles of specific resources for this job title and identify type of resource (i.e. book, pamphlet, film, etc.)	
Library or other Resource Center	6.34 Provide students with a variety of resources from which to choose.	

7.0 DEVELOPING AND USING QUESTIONS TO OBTAIN INFORMATION ABOUT JOBS.

P.O. 7.1

PRINCIPLE If I can develop good questions to ask my sources, then I can gain accurate information, so that I will know more about my jobs.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Definition of Physical Requirements. (See Appendix.)	7.11 Give oral and written definition of Physical Requirement. Have students read definition.	
Transparency or Chalkboard. Overhead Marking Pencil.	7.12 Give oral and written example(s) of Physical Requirements. Have students give oral examples. Add student examples to list.	
Printed example of Physical Requirements List. Transparency of Job Requirement Chart. (See Appendix.)	7.13 Give out printed example sheet to student. Copy one example onto Job Requirement Chart. Have students copy examples from sheet onto Job Requirement Chart.	
	7.14 Give oral and written examples of verbs which might be used to add to the column Physical. Have students give oral examples. Have students add at least one example to chart.	
Example sheets of Intellectual and Emotional Requirements. (See Appendix.)	7.15 Give oral and written example for at least one Intellectual and one Emotional Requirement. Give students printed example sheet. Read instruction 7.15.	

OBJECTIVE 7.1 THE LEARNER WILL CLASSIFY AND EXPAND JOB REQUIREMENTS UNDER THE HEADINGS PHYSICAL, INTELLECTUAL AND EMOTIONAL.

PREMISE If I can classify Job requirements as Physical, Intellectual and Emotional, then I can develop questions to ask my sources, so that I can gain accurate information.

VOCABULARY	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
FACTS & CONCEPTS	7.11 Read and listen to the definition of Physical Requirement.	Definition of Physical Requirement.
Job Requirement - What a job wants from me.	7.12 Read and listen to examples of Physical Requirements.	Examples of Physical Requirements.
Physical Requirement - What a person must be or do with his body on the job.	7.13 Copy the examples onto your Job Requirement Chart.	Job Requirement Chart
Intellectual Requirement- What a person must do with his mind on the job.	7.14 Using verbs, add at least one Physical Requirement to the chart.	
Emotional Requirement - What a person must feel on the job.	7.15 Repeat Steps one through four for the columns under Intellectual and Emotional.	Definitions and examples of Intellectual and Emotional Requirements.
Review: Verb		

OBJECTIVE 7.2 THE LEARNER WILL QUANTIFY EACH OF HIS JOB REQUIREMENTS FROM P.O. 7.1 AND WILL DEVELOP A QUESTION FOR EACH DEFINITION.

PRINCIPLE If I can quantify each of my job requirements, then I will know how well I must perform on a job, so that I can evaluate myself on job requirements.

VOCABULARY	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
FACTS & CONCEPTS	7.21 Read and listen to definition of quantify.	
Quantify - To state in a measureable way.	7.22 Look at your Job Requirement Chart under the heading Physical.	Job Requirement Chart from 7.15.
	7.23 Write a quantified definition of this job requirement using the phrase: Amount of time I have to spend (being, doing) ______.	
	7.24 Repeat steps two through three for the columns under Intellectual and Emotional.	
	7.25 On a separate sheet of paper, turn each of your statements into a question by using the question word: How (much, long fast etc.)	

OBJECTIVE 7.3 GIVEN SIX BASIC JOB QUESTIONS USING "WHO", "WHAT", "WHY", "WHEN", "WHERE", AND "HOW" ON A CHART WITH THE HEADINGS "PHYSICALLY", "INTELLECTUALLY" AND "EMOTIONALLY" THE LEARNER WILL EXPAND HIS NUMBER OF QUESTIONS TO 18.

PRINCIPLE If I can combine six question words with terms physically, intellectually, emotionally, then I will increase my number of career questions so that I will know what to ask of my sources.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
	7.31 Look at job description chart.	Job Description Chart
	7.32 Write the name of your first job title in the proper space.	pencil Job Expansion Chart from 6.31.
	7.33 Locate the cell which represents the first job question under the heading Physically.	
	7.34 In this cell write a question which is stated, "Who is a (job title) physically? (heading name)	
	7.35 Fill in each of the remaining cells with a question which combines the job question with the heading by adding the heading name (physically, intellectually, emotionally) to the job question.	
	7.36 Fill in a second chart substituting the title of your second job choice and repeating steps one through five above.	Second Job Description Chart

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7.0 DEVELOPING AND USING QUESTIONS TO OBTAIN INFORMATION ABOUT JOBS.

P.O. 7.3

PRINCIPLE If you can increase your number of career questions, then you will know what to ask your sources, so that you can gain more complete information.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Transparency of Job Description Chart Overhead Marking Pencil	7.31 Place transparency on overhead. Read each of the job questions which is listed. Read each of the headings of the columns.	
	7.32 Write a job title in the proper space on the transparency. Have students write own job title from their own favored cell on **Job Expansion Chart from 6.31.**	
	7.33 Point to the cell which represents the first job question under the heading Physical. Have students point to corresponding cell on their charts.	
	7.34 Write the questions in the cell, "Who is ______________ physically? Copy job title from top of page in blank. Have students write question in proper square and fill in own job title.	
	7.35 Repeat process above, filling in the question: Who is a __________ intellectually? Have students repeat process asking new question. Read instruction 7.15.	
	7.36 Read instruction 7.16.	

OBJECTIVE 7.4 GIVEN THE 18 QUESTIONS FROM P.O. 7.3 AND THE SEVEN SOURCES FROM P.O. 6.3, THE LEARNER WILL USE HIS SOURCES TO SUPPLY AT LEAST TWO QUANTIFIED ANSWERS FOR EACH OF HIS 18 QUESTIONS FOR EACH OF HIS JOB ALTERNATIVES.

PRINCIPLE If I can supply quantified answers to my job questions, then I will have useful information about jobs so that I will be able to make decisions about my career.

VOCABULARY	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
FACTS & CONCEPTS	7.41 Look at your first job description chart and read your first job question in the first cell.	Job Description Chart from 7.35.
	7.42 Use source list from P.O. 6.3 to locate the name of a source that can give you the answer to the above question.	Source list from 6.33.
	7.43 Locate the information in from that source.	
	7.44 Under your first job question on your chart write at least one quantified answer to that question, using the sentence: A ________ spends (amount of time) (doing, being) ____________.	pencil
	7.45 Repeat steps one through four until each cell has at least one quantified answer.	
	7.46 Repeat steps one through six for your second job description chart.	Job Description Chart from 7.36.

7.0 DEVELOPING AND USING QUESTIONS TO OBTAIN INFORMATION ABOUT JOBS.

P.O. 7.4

PRINCIPLE If you have useful information, then you can make better career decisions, so that you will be happy with your chosen occupation.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Transparency of Job Description Chart from 7.35	7.41 Point to first question on chart. Have students point to question on own charts.	
Example of Source list from 6.33 on transparency.	7.42 Show students example of information source list. Have students locate their own source list.	
	7.43 Choose one available source and locate information about a job title. Refer to definition and examples of Physical Job requirements and tell students you will use these as clues to help you find information.	
Definition and examples of quantified answers to questions.	7.44 Review quantified orally and in writing. Give a written and oral example of a quantified answer. Give student think step. (Amount of time I have to spend ________.) Have students provide oral examples of quantified answers to the question in the first cell.	
	7.45 Repeat step five for at least one more job question.	
	7.46 Read and write instruction for 7.46. Have students read instructions for 7.46.	

OBJECTIVE 8.1 THE LEARNER WILL STATE IN WRITING AT LEAST THREE PHYSICAL, THREE INTELLECTUAL AND THREE EMOTIONAL OCCUPATIONAL VALUES AND WILL DEFINE EACH IN TERMS OF QUANTITY.

PRINCIPLE: If I can state my occupational values in terms of quantity, then I will be able to clarify what's important to me so that I can choose between careers.

VOCABULARY	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
FACTS & CONCEPTS occupational value - What I want from a job.	8.11 Listen to teacher definition of occupational value.	
	8.12 Read the list of physical values and their definitions.	Physical values list.
physical occupational value - What I want to do with my body on a job.	8.13 Under the heading Physical Values write at least three of your physical values and define each in terms of quantity.	Pencil Paper
intellectual occupational value - What I want to do with my mind on the job.	8.14 Write a statement about each of your physical values using the sentence: I want to spend (amount of time) (doing,being) ________________.	
emotional occupational value - How I want to feel emotionally on the job.	8.15 Repeat steps one through three for your intellectual and emotional values, using the lists of Intellectual and Emotional values as a resource.	Intellectual and Emotional Values List.
Review: quantity		

8.0 CLARIFY AND IDENTIFY OCCUPATIONAL VALUES P.I.E (WHAT'S IMPORTANT TO ME).

P.O. 8.1

PRINCIPLE If you can clarify what is important to you, then you can choose between careers, so that the career you choose fits you.

TCHR MATERIALS	TEACHER PROCEDURE—(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Chalk board or overhead. Chalk or marking pencil.	8.11 Give oral and written definitions of physical value.	
Transparency of **sample value lists.** (See **Appendix.**)	8.12 Give students printed lists of values and definitions. Give oral and written examples of value with definitions.	
	8.13 Read instruction for 8.13. Under heading My Physical Values: Write three physical values and definitions. Review term: Quantity.	
	8.14 Next to one of the Physical values write a statement about that value, using the sentence: I want to spend (amount of time) (doing, being) (value). Have students give oral examples using the above format. Write student examples.	
	8.15 Give oral and written examples of at least one intellectual and one emotional value (steps three through four).	

OBJECTIVE 9.1 THE LEARNER WILL USE NUMBERS TO SHOW THE RELATIVE IMPORTANCE OF HIS OCCUPATIONAL VALUES AND WILL MAKE AN INTERPRETIVE STATEMENT REGARDING HIS NUMBERS.

PRINCIPLE: If I can use numbers to show the importance of my values, then I will know more clearly the order of my values, so that I can make better choices.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Review: Weight	9.11 Read your list of occupational values.	Students previously prepared list from 8.15.
	9.12 Assign the weight of ten to that value which is most important to you.	Pencil
	9.13 Assign the weight of one to that value which is least important to you.	
	9.14 Using numbers between one and ten, assign weights to your remaining values.	
	9.15 Make a statement about your most important value by using the sentence: My most important occupational value is ________ because ________.	
	9.16 Make a statement about your least important value by using the sentence: My least important occupational value is ________ because ________.	

9.0 ORDERING OF OCCUPATIONAL VALUES.

P.O. 9.1

PRINCIPLE If you know the order of your values, then you can make better choices, so that your most important values are considered when you choose a job.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATIO
Overhead or chalkboard Transparency	9.11 Tell students to read lists of occupational values. Ask students for oral examples. Write students oral examples. (at least three).	
Definition of Weight - A number which represents how much you like or dislike something.	9.12 Review term weight. Assign weights of ten to your most important value. Ask student what the number means. Have students assign ten to one of their own values.	
	9.13 Assign weight of one to your least important value. Ask students what the number means. Have students assign weight of one to one of their own values.	
	9.14 Assign weight to remaining value(s). Ask student what number(s) means. Have students assign weights to their remaining values.	
	9.15 Write and read the statement: "My most important value is ________________ because (your own reason). Have students make their own statement.	
	9.16 Write and read the statement: "My least important value is ____________ because (your own example). Have students make their own statement.	

OBJECTIVE 10.1 USING A FAVORABILITY SCALE, THE LEARNER WILL EVALUATE EACH OF HIS JOB ALTERNATIVES IN TERMS OF EACH OF HIS OCCUPATIONAL VALUES.

PRINCIPLE If I can assign a favorability sign to each of my jobs according to my values, then I can evaluate the job, so that I can decide whether or not the job fits me.

VOCABULARY

FACTS & CONCEPTS

Favorability scale - A scale which I can use to show what the job will give me in terms of each occupational value.

++ most favorable
+ favorable
+- acceptable
- unfavorable
-- least favorable

Review:

Favorable

	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
10.11	Write your first job title on your decision-making chart. Look at your first occupational value.	Decision-making chart Pencil
10.12	Copy your occupational values and weights onto decision-making chart.	Values and weights from 9.14.
10.13	Use your job requirement chart from P.O. 7.22 to determine if the job gives you your occupational value.	Job requirement chart from step 7.22.
10.14	Listen to description of favorability scale.	
10.15	Assign a favorability sign to your first job in terms of your first occupational value.	
10.16	Repeat steps one throught four for each of your occupational values.	
10.17	Repeat steps one through five for your second job title.	Another decision-making chart.

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10.0 EVALUATION OF JOB BASED ON PERSONAL OCCUPATIONAL VALUES.

P.O. 10.1

PRINCIPLE If you can evaluate the job, then you can make a better job decision, so that you are happier with your chosen occupation.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATIOI
Transparency of Decision-making chart. (See Appendix.) Overhead. Marking Pencil.	10.11 Give students first decision-making chart. Put transparency on overhead. Write a job title in the proper space.	
	10.12 Write in occupational values and weights (at least one P, one I, and one E) in proper spaces on decision-making chart. Tell students to copy values and weights from 9.14 onto chart. Point to the proper spaces.	
Transparency of completed Job Description Chart from P.O. 7.2.	10.13 Read occupational value. Point to answer on job description chart which is related to value. Have students locate answer to their value on own job description chart.	
Transparency of Favorability Scale.	10.14 Write (or point to) favorability scale. Tell students meanings of signs. Have students give meanings of signs.	
	10.15 Assign to first job in terms of first value favorability sign in proper space. Tell students why you gave it the sign you did. Have students assign favorability sign to own first job and value.	
	10.16 Read instruction for 10.16. Assign favorability sign to job in terms of second value. Have student tell you what the sign means.	
	10.17 Give students second decision-making chart. Read instruction for 10.17.	

OBJECTIVE 10.2 USING ADDITION AND SUBTRACTION, THE LEARNER WILL DETERMINE A SCORE FOR EACH OF HIS JOB RELATED VALUES AND COMPUTE A JOB SCORE FOR EACH OF HIS JOB ALTERNATIVES.

PRINCIPLE: If I can determine my job score for each of my job alternatives, then I can use these scores to evaluate my jobs, so that I can better understand how a job fits me.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE - (DO STEPS, EXERCISES, ETC)	MATERIALS
decision-making chart	10.21 Look at decision-making chart with favorability and weighted values.	
Positive numbers - Numbers greater than zero.	10.22 For each value with only "+" signs add its weight once for each time a "+" sign appears and write the sum as a positive number next to the favorability sign.	
Negative numbers - Numbers less than zero. Think of a game where your score goes in the hole.	10.23 For each value with only "-" signs add its weight once for each time a "-" sign appears and write the sum as a negative number next to the favorability sign.	
Job Score - A number we assign to a job to show how well it matches our values.	10.24 For each value where both a "+" and "-" sign appears the sum should be 0 and written next to the favorability sign.	
	10.25 Add all positive scores from step 10.22 and write the answer in the margin.	
	10.26 Add all negative scores from step 10.23 and write in margin beneath answer to positive scores.	
	10.27 Subtract negative scores from positive scores and record answer as job score.	

GOAL 10.0 EVALUATION OF JOB BASED ON PERSONAL OCCUPATIONAL VALUES.
P.O. 10.2

PRINCIPLE If you can use a job score to evaluate your job, then you can better understand how the job fits you, so that you can decide if it is the job for you.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
	10.21 Use a chart to point out weights and favorability signs.	
Decision-making chart on Board or Overhead showing name of job, some values, weights and favorability signs. Chart should include values with all possible favorability signs: ++, +, +-, -, --.	10.22 Explain that you first look at only values with just "+" signs. Your example should have several such signs. Use the weight once for each "+" sign and show sum next to favorability sign. If students are familiar with positive and negative numbers use "+" sign for positive next to the sum e.g. (+18). If they are unfamiliar with it or it causes confusion, write the sum as (positive 18) or (gain 18).	
	10.23 Go through the same process with values having only "-" signs and write answer as e.g. (-14) or (negative 14) or (loss 14).	
	10.24 Point out any value where both a "+" and "-" sign appears and ask what happens when there is a gain of a certain amount; e.g. six and a loss of the same amount. Explain then that whenever a + and - sign appears the sum is zero.	
	10.25 Point out all answers marked + or positive or gain and find their total and show a place on chart to write it such as the margin.	
	10.26 Point out all answers marked - or negative or loss, find their total and write it beneath the answer from step 10.25.	
	10.27 Subtract the total negative score from total of positive scores and show students on the chart where to place their result which we will call the job score.	

OBJECTIVE 10.3 THE LEARNER WILL USE ADDITION AND THE NUMBERS WHICH REPRESENT HIS WEIGHTED VALUES TO DETERMINE AN IDEAL JOB SCORE.

PRINCIPLE: If I can determine an ideal job score, then I can compare it with real job scores, so that I can determine which job fits me best.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Ideal Job Score - The number which represents a job which provides all chosen occupational values. Column - A vertical list.	10.31 Write a favorability sign for each of your values. Remember this is for an ideal job.	Weighted values from 9.14. pencil paper
	10.32 Use the weight of your value once for each "+" isgn and show sum next to favorability sign.	
	10.33 Repeat Steps one and two for each occupational value.	
	10.34 Add the numbers from step 10.33 to get ideal job score.	
	10.35 Make a statement: "My ideal job score is ______________."	

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[illegible] 10.0 EVALUATION OF JOB BASED ON PERSONAL OCCUPATIONAL VALUES.

P.O. 10.3

PRINCIPLE If you can compare your real and ideal job scores, then you can determine how well the job fits your values, so that your job choice will be right for you.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS		NOTES & EVALUATION
Overhead and marking pencil or Chalk board and chalk Weighted values from 9.14 on transparency or board.	10.31	Read and write Step 10.31. Do Step 10.31. Have students do 10.31. Explain that an ideal job should meet one's values very favorably, therefore; such a job would have a ++ assigned each value and we would use the value's weight twice.	
Weighted values from 9.14 on transparency or board.	10.32	Show weighted values and 9.14 transparency. Have students locate weighted values from P.O. 9.14. Read Step 10.32. Do Step 10.32. Have students do 10.32.	
Definition of ideal job score.	10.33	Read instruction for Step 10.33. Have students do 10.33.	
	10.34	Define: ideal job score. Add column of numbers from previous step. Tell students to add numbers from previous step.	
Prepared statement.	10.35	Write and read statement: My ideal job score is __________. Fill in blank with total from previous step. Have students write completed statement using total from previous step.	

OBJECTIVE 10.4 USING HIS IDEAL JOB SCORE FROM P.O. 10.3 AND EACH OF HIS JOB SCORES FROM P.O. 10.2, THE LEARNER WILL USE DIVISION TO SHOW WHICH OF HIS JOB SCORES MOST NEARLY APPROACHES HIS IDEAL JOB SCORE AND WILL MAKE A STATEMENT WHICH INTERPRETS HIS RESULTS.

PRINCIPLE If I can compare each of my job scores to my ideal score, then I can see which is closest to my ideal job, so that I can choose one job to explore more thoroughly.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(NO STEPS, EXS. USED, ETC)	MATERIALS
fraction numerator - top number in a fraction.	10.41 Write a fraction using your job score for your first job alternative as the numerator and ideal job score as the denominator.	Job score from 10.29. Ideal Job score from 10.36. Paper, Pencil
denominator - bottom number in a fraction. divide decimal fraction	10.42 Divide the numerator of the fraction by the denominator to get a decimal fraction.	
multiply percent sign %	10.43 Multiply your answer by 100 and add a percent sign %.	
job favorability score - the percentage which indicates how your job score compares to your ideal job score.	10.44 Make the statement: My job favorability score for my first job alternative is ____% of my ideal job score.	
	10.45 Repeat steps one through four for your second job alternative.	Ideal Job score from 10.20.
compare alternative	10.46 Compare the answer from step four with the answer from step five.	
	10.47 Make a statement: My (first or second) job alternative is better for me than my (first or second) job alternative because ______________.	

10.0 EVALUATION OF JOB BASED ON PERSONAL OCCUPATIONAL VALUES.

2.0. 10.4

PRINCIPLE If you can compare more than one job to an ideal job score, then you can choose the best one to explore further, so you can gain more information.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
A prepared example such as Job score 62, Ideal score 85.	10.41 Show a job score and an ideal score and review their meaning. Form a fraction $\frac{\text{job score}}{\text{ideal score}}$ e.g. $\frac{62.}{85}$	
Prepared example e.g. $\begin{array}{r} .72 \\ 85\overline{)62.00} \\ \underline{59.5} \\ 2.50 \\ \underline{1.70} \\ 80 \end{array}$	10.42 Tell students to change the fraction to its decimal form by dividing ideal score$\overline{)\text{job score}}$ e.g. $85\overline{)62}$. Show that to do this a decimal point must be placed behind the job score and two zeros annexed to the number e.g. $85\overline{)62.00}$. Complete division and ignore any remainder that may occur.	
.72 x 100 = 72.00 or .72 x 100 = 72. = 72 therefore .72 = 72%	10.43 Explain that to change a decimal number to a percent you can multiply by 100 and attach a "%" sign. Tell students an easy way to multiply by 100 is to move the decimal point two places to the right.	
Format example e.g. See student step 10.44.	10.44 Show student format statement and complete it for your above example.	
A second job score and a prepared example.	10.45 Repeat above process for a second job.	
	10.46 Compare your first job percent to second job percent.	
Prepared statement.	10.47 Make a comparative statement about the two job scores using format statement as shown in student step 10.47.	

OBJECTIVE 11.1 THE LEARNER WILL IDENTIFY AND CONTACT A PERSON WITH THE LEARNER'S JOB ALTERNATIVE AND MAKE AN APPOINTMENT FOR AN INTERVIEW.

PRINCIPLE If I can contact a person for an appointment for an interview, then I can interview, the person, so that I can learn what would be required of me on his job.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Program - A list of step-by-step instructions.	11.11 Read and listen to provided program steps for contacting a people source of information by phone.	Phone Contact Program.
Role play - Act out a situation.	11.12 Observe role playing situation which uses the program.	
	11.13 Role play the situation with another person.	A partner.
	11.14 While being observed, contact your own people source and go through steps in the program.	The name and phone number of your people source. Your program from 11.11.
	11.15 Give information about interview place and time to teacher on a sheet signed by your observer.	pencil paper

P.O. 11.1

11.0 IDENTIFYING SPECIFIC SKILLS THROUGH PERSONAL INTERVIEW.

PRINCIPLE If you can interview a person on the job, then you can learn what is required of you, so that you can evaluate yourself on these requirements.

TEACHER MATERIALS	TEACHER PROCEDURE - TELL, SHOW, DO METHODS	NOTES & EVALUATION
Transparency of Phone Contact Program. or Written on board.	11.11 Give students printed program steps. Read through entire program. Have students read through program steps.	
Definition of Role Play. Another adult.	11.12 Define role play. Role play a telephone conversation with a person in which you go through all of the program steps. Have students read program as they observe you role playing.	
Large enough room to prevent confusion.	11.13 Tell students to select partners. Tell students to role play using their program as a guide. Have students role play in both roles (interviewer and interviewee).	
Lists of possible contacts for students. Telephone books. Newspapers. You. Telephone. Counselor or other adult.	11.14 Tell students they are to identify and contact someone in their first job alternative. Find the name of one person in one job alternative in the telephone book. Assign 11.14 as homework. (If student does not have phone, arrange to make calls from school.) (See Note to Teacher.)*	
	11.15 Collect information from each student regarding interview place and time. Ask students to tell some of their experiences and feelings about the contacts they made.	
	* Note to Teacher: Student should be observed while making contact. Observation could be made by parent, teacher, counselor or other adult.	

OBJECTIVE 11.2 THROUGH CLASSROOM SIMULATION THE LEARNER WILL PRACTICE ATTENDING, RESPONDING AND SUMMARIZING SKILLS IN PREPARATION FOR AN "ON-THE-JOB" INTERVIEW.

PRINCIPLE: If I can attend, respond, and summarize in a classroom, then I can attend, respond and summarize during my interview so that I can gain more information from my people source.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Attending - Showing attention physically, intellectually and emotionally.	11.21 Read and listen to definitions of attending and responding.	
	11.22 Read steps 11.24 - 11.212.	
Responding - Verbally repeating the exact meaning of a person's statement.	11.23 Observe teacher demonstration of attending, responding and summarizing skills.	
	11.24 Face your partner squarely.	partner chair
Eye contact - Looking at a person's eyes when you are talking with him.	11.25 Lean toward your partner.	
	11.26 Maintain eye contact.	
Summarize - To verbally respond with one short statement that gives the meaning of several statements.	11.27 Ask the question, "What is one thing you like about school and why?"	questions
	11.28 Listen to partner's answer.	
	11.29 Repeat partner's answer word for word.	
	11.211 Repeat steps five through seven, three times asking for more information each time.	
	[illegible]	

P.O. 11.2

PRINCIPLE If you can attend, respond and summarize during an interview, then you can be sure you are hearing a person correctly, so that your information is accurate.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Chalkboard or Overhead Chalk or Marking Pencil	11.21 Give oral and written definitions of attending, responding and summarizing. Give oral and written definitions of eye contact. Have students read definitions.	
Student Procedure steps for P.O. 11.2.	11.22 Read steps 11.24 - 11.212. Have students read 11.24 - 11.212.	
Partner	11.23 Tell students to observe you and to follow their program steps. Using the program steps 11.24 - 11.212 demonstrate attending, responding and summarizing.	
Large room Chairs in pairs or in a circle with one pair in the middle of the circle.	11.24 - 11.212 Have students choose partners. Have students do Steps 11.24 - 11.212. Circulate around room observing student performance or students may demonstrate two at a time in front of class.	

OBJECTIVE 11.3 THE LEARNER WILL USE A PRE-INTERVIEW CHART TO DEVELOP PRE-INTERVIEW PROGRAMS.

PRINCIPLE If I can develop a pre-interview program, then I can do what I said I had to do, so that I will be ready for my interview.

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VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Pre-Interview - Before the interview.	11.31 In proper cell, write the question, "What do I have to do physically the day before the interview?"	Pre-Interview Program Chart.
	11.32 Write at least two answers to question one under heading Day Before on Chart.	
	11.33 Write the question, "What do I have to do intellectually the Day before the interview?" in the proper cell.	
	11.34 Write at least two answers for question two.	
	11.35 Write the question, "What do I have to do emotionally the day before the interview?"	
	11.36 Write at least two answers for question three.	
	11.37 Repeat steps one through six to get questions and answers for all other cells on chart.	
	11.38 Add at least one more answer to each cell.	

T- 11.0 IDENTIFYING SPECIFIC SKILLS THROUGH PERSONAL INTERVIEW.
P.O. 11.3

PRINCIPLE If you do what is necessary to get ready for your interview, then you will be prepared for your interview, so that your interview will be successful.

TEACH MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Transparency of Pre-Interview Chart(Appendix) Overhead Projector Marking pencil	11.31 Give students Pre-Interview Charts. Put Chart on overhead. Point to first cell on chart and write question, "What do I have to do physically the day before the interview?"	
Prepared answers to question one.	11.32 Give an oral and written answer to the first question. Have students give a second answer to the first question. Write down student answer.	
Prepared answers to question two and three.	11.33 - 11.36 Repeat process from two previous steps using questions: "What do I have to do intellectually the day before the interview?" and "What do I have to do emotionally the day before the interview?"	
	11.37 Read instruction 11.37 to student. Have students read instruction for 11.37. Have students do 11.37.	
	11.38 Read instruction 11.38 to students. Have students read 11.38. Have students do 11.38.	

OBJECTIVE 11.4 THROUGH A PERSONAL INTERVIEW WITH SOMEONE "ON-THE-JOB" THE LEARNER WILL DETERMINE AT LEAST FIVE SKILLS THAT THE PERSON MUST PERFORM BY ASKING QUESTIONS ABOUT: WHAT HE DOES, HOW WELL AND WHY.

PRINCIPLE If I can interview a person properly, then I can gain more and better information about my job, so that I can determine what skills I need to do the job.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Introduce	11.41 Read and listen to the following five steps.	
Interview - Face to face meeting to gain information.	11.42 Introduce yourself.	
	11.43 Tell the person being interviewed that you have several questions to ask.	
Review: Attend Respond Role play	11.44 Ask: "What one thing do you do that I could learn to do at my age?", "How well must it be done?", "May I watch you do it?", "May I try to do it?"	
	11.45 Attend and respond to person.	Attending and responding skills from P.O. 11.2.
	11.46 Repeat steps three and four until you have at least three skills identified.	
	11.47 Role play Steps 11.41 - 11.45 with someone in your class.	Partner
	11.48 Make real interview with someone "on-the-job."	people source
	11.49 Fill out job skill chart with answers you receive.	Job skill chart with questions.

11.0 IDENTIFYING SPECIFIC SKILLS THROUGH PERSONAL INTERVIEW.

PRINCIPLE If you can gain more and better information about a job, then you can determine what skills you need to do the job, so that you will know where you are and where you have to go.

[illegible] MATERIALS	TEACHER PROCEDURE-TELL, SHOW, DO METHODS	NOTES & EVALUATION
Transparency of Steps 11.41 - 11.42. Overhead projector Chalkboard and chalk	11.41 Give oral and written definition of Interview. Give oral and written steps 11.41 - 11.42. Have students read steps 11.42 - 11.46.	
	11.42 - 11.43 Write Step 11.41 and 11.42 on board. Show students examples of introduction. Have students demonstrate introduction.	
	11.44 Write and read questions from 11.44. Have one student read questions orally. Have all students read questions silently.	
	11.45 Write step 11.45. Review attend and respond orally. Have a student demonstrate attending and responding.	
	11.46 Write step 11.46. Read 11.46. Have students read 11.46 and discuss.	
A pair of rehearsed students. Room arranged for role playing.	11.47 Read and write step 11.47. Review role play. Have two students (previously selected) role play steps 11.42 - 11.46. Have all students role play steps 11.42 - 11.46.	
	11.48 Read and write step 11.48. Have step 11.48 as homework assignment. Have students do 11.48.	
	11.49 Show visual example of Job Skill Chart. Give students printed Job Skill Charts. Orally explain Job Skill Chart. Have students complete Job Skill Chart. Collect Job Skill Charts.	

OBJECTIVE 12.1 USING THE NUMBERS ONE, TWO AND THREE THE LEARNER WILL EVALUATE HIMSELF ON EACH OF THE JOB SKILLS DESCRIBED DURING HIS INTERVIEW AND IDENTIFY THE SKILL(S) IN WHICH HE IS DEFICIENT.

RATIONALE: If I can identify the job skills that I lack, then I can see how I stand in relation to the job, so that I can begin to prepare myself for the job.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE - (DO STEPS, EXERCISES, ETC)	MATERIALS
self evaluation - measuring oneself in terms of job requirements.	12.11 Look at self evaluation chart.	Self Evaluation Chart
	12.12 Write one of your job skills at the top of the page in column one.	pencil job skills from 11.48
	12.13 If you can do the skill as well as would be required on the job put an X on the line next to the two.	
	12.14 If you can do the skill better than would be required on the job put an X above the line across from the three.	
	12.15 If you can not do the skill as well as would be required on the job put an X under the line next to the one.	
	12.16 Repeat steps one through five for at least two other skills using columns two and three.	
	12.17 Finish this sentence: The skill(s) which I can not do at the required level is (are) ____________________.	

GOAL 12.0 EVALUATION OF ONESELF IN RELATION TO THE JOB REQUIREMENTS.

P.O. 12.1

PRINCIPLE If you can see how you stand in relation to the required skills of a job, then you can prepare yourself for the job, so that you will perform well.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Transparency of Self Evaluation Chart (See Appendix.) Overhead.	12.11 Give students printed Self Evaluation Chart. Read and point out Step 12.11. Have students do Step 12.11.	
Prepared name of job skill.	12.12 Read and point out Step 12.12. Write a job skills in column one. Have students write job skill on paper.	
	12.13 Read and write step 12.13. Tell students to ask himself, "Can I do the skill as well as would be required on the job?" If yes, they can put an X in the proper space on the chart. If no, go on to step 12.14. Do example. Have students do step 12.13.	
	12.14 Read and write step 12.14. Tell students to ask themselves, "Can I do the skill better than would be required on the job?" Do example. Have students do step 12.14.	
	12.15 Read and write step 12.15. Tell students to ask himself the question, "Can I not do the skill as well as would be required on the job?" Do example. Have students do 12.15.	
	12.16 Read step 12.16. Tell students to do 12.16.	
	12.17 Give oral and written example of format sentence from 12.17. Have students name the skills on which you rated yourself. Write the completed sentence. Tell students to do step 12.17.	

OBJECTIVE 13.1 USING THE SKILLS DEFINED IN P.O. 12.1 IN WHICH THE LEARNER IS DEFICIENT THE LEARNER WILL DEVELOP AT LEAST ONE SKILLS ACQUISITION PROGRAM WHICH STATES WHAT HE CAN DO, WHAT HE WANTS TO BE ABLE TO DO, AND THE NECESSARY SEQUENTIAL INTERMEDIATE STEPS.

PRINCIPLE: If I can write a program, then I can determine how I am going to reach my last step, so that I can practice my program and develop my skill.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)		MATERIALS
Review: Program Proper order	13.11	Write one job skill you do not have as yet, at the bottom of your paper.	paper pencil statement from self evaluation chart from 12.17.
	13.12	Write a first program step (which will be "Observing someone performing the skill" at the top of your paper.	
	13.13	Write a middle program step between the top and bottom steps, remembering what you saw during your observation of the skill. (Use your job skill chart from 11.49.)	Job Skill Chart from 11.49.
	13.14	Write additional program steps between the steps you already have until all steps have been included in proper order.	

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13.0 DEVELOP PROGRAMS FOR ACQUIRING NEEDED OCCUPATIONAL SKILLS.

P.O. 13.1

PRINCIPLE If you can practice your program and develop your skills, then you will be ready for the job, so that you can get the job you want.

TCHR MATERIALS	TEACHER PROCEDURE - TELL, SHOW, DO METHODS	NOTES & EVALUATION
overhead or chalk board	13.11 Write a job skill at the bottom of the board or transparency. Tell students to look at Self evaluation form, find a skill they do not have and write it at the bottom of their paper. (Use a skill that will be familiar to all students, such as writing on the chalk board.)	
	13.12 Review the fact, program. Write "Observing someone performing the skill as the first program step. Have students copy as their first program step. Most students should have done this during their interview. If they have not this will be their first step.	
	13.13 Write a middle program step. Tell students to use the Job Skills Chart from 11.49 to fill in a middle step. (Students who have not yet made observation can not fill this out without observation or a written description of the skill.)	
	13.14 Show students how to write sequential steps. Ask students for steps and ask them to check for sequence. Have students complete their own programs with at least five steps.	

OBJECTIVE 13.2 USING THE PROGRAM DEVELOPED IN P.O. 13.1 THE LEARNER WILL PRACTICE EACH STEP OF THE PROGRAM UNTIL HE CAN PERFORM THE SKILL.

PRINCIPLE If I practice my program until I have the skill, then I can perform the skill, so that I'll be prepared to get a job.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Program - Steps I perform to gain a certain skill. Step Chart	13.21 Look at example of program. Listen to the think steps needed for writing a program. Look at your program from step 13.14.	Program from step 13.14.
	13.22 Write the steps from your program on the step chart.	Step Chart Pencil
	13.23 Look at your first step. If you have completed this step mark an X beside the step. If you have not completed the step you must wait until you have completed it before marking that step.	
	13.24 Work daily at completing your steps. If for some reason you cannot do this ask your teacher for advice with regard to your situation.	
	13.25 After completing all steps in your program practice the entire program until you are sure you have mastered the skill well enough to be able to do it on the job.	
	13.26 Perform the skill for a person on the job or for a parent or teacher and turn in your completed step chart to your teacher.	

13.0 DEVELOP AND CARRY OUT PROGRAMS FOR ACQUIRING NEEDED OCCUPATIONAL SKILLS.

P.O. 13.2

PRINCIPLE If you can perform a skill, then you can get a job, so that you can stand on your own.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Prepared program with five steps.	13.21 Show students a program and review how the steps relate i.e. first step is observation, last step is the skill, intermediate steps are sequential etc. All steps are observable, measurable, and repeatable. Have students look at their own programs from step 13.14.	
Prepare and hand out the student's Step Chart. (Appendix.)	13.22 Show step chart and fill in the steps using the above program. Instruct students to do the same using their own program.	
	13.23 Mark an X on first step. Explain that student should do same only if he has completed observing someone performing the skill.	
	13.24 Explain that the student is to practice and complete the steps on his or her own time or free class time when applicable. Also that they should be worked on daily until the skill is mastered. Teacher must check to see that the steps and not too large for student to perform before the career course ends.	
	13.25 Explain to students that the skill must be done well enough to do it on the job.	
Prepared note for signature of the skill observer.	13.26 Tell student that ideally he should try to perform the skill on the job, but if this is not possible it should be performed for a parent or teacher. The student should get a note from the person stating that he has observed the student perform the skill satisfactorily.	

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OBJECTIVE 14.1 USING THE FORMAT, IF I CAN (JOB SKILL), THEN I CAN (GOAL), SO THAT I CAN (HUMAN BENEFIT).

PRINCIPLE If I can write a principle for each of my job skills, then I can see how my skill is related to my goal, so that I will know why I should learn the skill.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE - (DO STEPS, EXERCISES, ETC)	MATERIALS
goal - The end toward which effort is directed.	14.11 Read the description of your first job skill.	Statement of job skills from 12.17.
human benefit - That which is good for human beings.	14.12 Rewrite this sentence to make a principle for yourself: If I can (job skill), then I can (goal), so that I can (human benefit).	definitions of: principle job skill goal human benefit
principle - A statement which relates what a person can do to what he wants to be able to do and why he wants to do it.	14.13 Repeat steps one and two for each of your job skills.	

14.0 INVESTIGATE PRINCIPLES THAT RELATE PERFORMANCE TO GOALS TO HUMAN BENEFIT.

P.C. 14.1

PRINCIPLE If you can see how your skill is related to your goal, then you will know why you should learn the skill, so that you will have a reason to work harder.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATIO
overhead or chalkboard	14.11 Have students read description of one of their job skills. Write a job skill. Have students write on of their job skills.	
Prepared Principle Statement	14.12 Write format sentence on the board. Have oral and written definition of goal, human benefit, and principle. Rewrite format sentence, supplying information in blanks. Have students write a principle. Have several students read examples of principles or put on board.	
	14.13 Write and read step 14.13. Do one more example. Have students do 14.13.	

OBJECTIVE 15.1 USING ANY NEW INFORMATION WHICH HE HAS GAINED, THE LEARNER WILL REDO THE FAVORABILITY SCORES FOR HIS JOB AND WILL USE ADDITION AND SUBTRACTION TO RE-EVALUATE HIS CHOSEN JOB ALTERNATIVE.

PRINCIPLE If I can re-evaluate my job using new information, then I can compare my new job with my old job score, so that I can better see if the job fits my occupational values.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Review: Job description chart Occupational values Weights Favorability signs Job score	15.11 Write down any new information you have gained about your first job alternative on your job description chart from P.O. 7.2.	Pencil Paper Job Description Chart from 7.26.
	15.12 On the new decision-making chart write the name of your first job alternative.	New Decision Making Chart
	15.13 Copy your occupational values and weights from 9.14.	
	15.14 Assign favorability signs to your first job alternative for each of your occupational values.	
	15.15 Use addition and subtraction to compute a job score.	

15.0 REEVALUATION OF JOB WITH REGARD TO NEW INFORMATION.

P.O. 15.1

PRINCIPLE If you compare your old and new job scores, then you will have a better basis to evaluate your job, so that you can make an even better decision.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS		NOTES & EVALUATIO
Overhead/Chalkboard Transparency of Job Description Chart	15.11	Read and write Step 15.11. Have students read and find their Job Description Chart. Write down example of new information. This could be a change in an old information or new information. Have students add new or different information to Job Description Chart.	
Transparency of Decision Making Chart.	15.12	Write job name on proper blank. Have students write own job alternatives on chart.	
	15.13	Have students find values and weights from 9.14. Write at least three values on your chart. Tell students copy their own values and weights on chart.	
	15.14	Review the process of assigning favorability signs by using student input. Tell them the original program is in P.O. 10.1. Tell students that new information should change their favorability signs. (Not their values or weights.) Have student do 15.14.	
	15.15	Review Job Score and the process used to obtain it from P.O. 10.2. Have students compute new job score.	

OBJECTIVE 15.2 THE LEARNER WILL USE DIVISION AND MULTIPLICATION, TO COMPARE HIS PRESENT JOB FAVORABILITY SCORE AND INITIAL JOB FAVORABILITY SCORE AND MAKE A STATEMENT CONCERNING THEIR RELATIVE FAVORABILITY.

PRINCIPLE If I can compare my present favorability score with my first favorability score, then I can reevaluate the job, so that I can decide if the job is right for me.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Review: job favorability score ideal job score	15.21 Write down your ideal job score from P.O. 10.3.	Ideal job score from 10.36.
	15.22 Using your new job score from P.O. 15.1 and your ideal job score from P.O. 10.3 use division and multiplication to compute a new job favorability score.	Job score from 15.15.
	15.23 Write down your old job favorability score from P.O. 10.4.	Job favorability score from 10.4.
	15.24 Compare your old job favorability score with your new job favorability score.	
	15.25 Make a statement using this sentence: My first job alternative is (more or less) favorable for me now because ________________.	

GOAL 15.0 REEVALUATION OF JOB WITH REGARD TO NEW INFORMATION.

P.O. 15.2

PRINCIPLE If you can reevaluate your job, then you can decide if the job is right for you, so that you don't get trapped in an unhappy job situation.

TCHR MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Chalkboard or overhead	15.21 Review ideal job score. Have students find ideal job score from 10.36 and write it down.	
	15.22 Review Job Favorability Score. Review process for determining job favorability score. Tell students the process is given in P.O. 10.4. This may be used for review. Do example of process using new job score and old ideal score. Have students do step 15.22.	
	15.23 Read step 15.23. Have students locate and write down Job Favorability Score from 10.44.	
	15.24 Write new and old job favorability score. Ask student which represents better job choice and why. (The higher percentage is the better job because it shows that it is closer to the ideal job.)	
Prepared statement.	15.25 Write format. Using information from 15.24 fill in information in blanks in statement. Have students use their own information to write a completed statement.	

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OBJECTIVE 16.1 THE LEARNER WILL INCREASE HIS LIST OF OCCUPATIONAL VALUES FROM P.O. 8.1 BY AT LEAST ONE VALUE, ASSIGN NEW WEIGHTS, COMPUTE A NEW IDEAL JOB SCORE AND COMPARE IT TO HIS OLD IDEAL JOB SCORE.

PRINCIPLE If I can compute a new job score based on new values, then I can reevaluate my new job, so that I can see how my new value affected how right the job is for me.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Review: occupational value quantity weight ideal job score Compute - To determine mathematically.	16.11 Write down at least one new occupational value and define it in terms of quantity.	Pencil Paper
	16.12 Copy your list of occupational values from P.O. 8.1 and add your new value to the list.	Occupational values from P.O. 8.1.
	16.13 Using numbers one through ten, weight your values.	
	16.14 Using addition, compute a new ideal job score.	Refer to 10.3 for process.
	16.15 Copy your old ideal job score from P.O. 10.3.	
	16.16 Compare your old ideal job score from P.O. 10.3 with your new ideal job score.	
	16.17 Finish the sentence: By adding (number of new values) I have (raised, lowered) my ideal job score.	

16.0 REEVALUATION OF OCCUPATION WITH REGARD TO CHANGE OF VALUES.

P.O. 16.1

PRINCIPLE -- If you can reevaluate your job in terms of a change in values, then you can see how any change in values might affect job choice, so that you can always evaluate your job situation in the future.

TEACH. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Chalkboard or overhead	16.11 Review terms Occupational Value and quantity. Do one example. Tell students to write down something new that they have decided they would like to have from a job.	
	16.12 - 16.13 Write at least three occupational values. Call these your old values. Add a new value. Review the weighting process with students. Weight your new set of values. Discuss how adding one value changes the weights of the others. Have students copy their values (not weights). Add their new value and reweight.	
Program steps for computing ideal job score (10.2)	16.14 Review process for computing ideal job score. Have students compute new ideal job score.	
Old ideal job score	16.15 Refer student to P.O. 10.3 for their old ideal job score. Have them copy it.	
	16.16 Have students compare old and new ideal job scores and discuss why there is a change.	
Prepared Statement.	16.17 Write format sentence: By adding (number of new values) I have (raised, lowered) my ideal job score. Rewrite sentence in completed form. Have students write completed sentence using information from step 16.16.	

OBJECTIVE 16.2 USING HIS WEIGHTED VALUES FROM P.O. 16.1 AND THE FAVORABILITY SCALE, THE LEARNER WILL USE ADDITION AND SUBTRACTION TO DETERMINE A NEW JOB SCORE FOR HIS FIRST JOB ALTERNATIVE.

PRINCIPLE If I can determine a new job score, then I can reevaluate my job, so that I can see if the job still fits me.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
Review: favorability signs compute	16.21 Copy your occupational values and weights from P.O. 16.1 on your new decision making chart.	Information from P.O. 16.1. Decision Making Chart. Pencil
	16.22 Assign favorability signs to your job for each of your occupational values.	
	16.23 Use addition and subtraction to compute a new job score for your first job alternative.	

16.0 REEVALUATION OF OCCUPATION WITH REGARD TO CHANGE OF VALUES.

P.O. 16.2

PRINCIPLE If you can reevaluate your job, then you can see if the job fits you when your values change, so that you can always choose a job that's right for you.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATION
Overhead Transparency of Decision Making Chart	16.21 Read and write Step 16.21. Do 16.21. Have students do Step 16.21.	
	16.22 Review process for assigning favorability signs. Do 16.22. Have students do 16.22.	
	16.23 Review process for computing job score. Have students compute Job Score.	

OBJECTIVE 16.3 USING HIS REEVALUATED INFORMATION ABOUT HIS FIRST JOB CHOICE FROM P.O. 16.1 AND 16.2 THE LEARNER WILL USE DIVISION, MULTIPLICATION AND % TO FIND HIS NEW FAVORABILITY SCORE AND COMPARE IT WITH THE SCORE FROM P.O. 10.4.

PRINCIPLE If I can compute my new favorability score and compare it with the old, then I will know if this job is more or less suitable for me, so that I can decide whether to pursue it.

VOCABULARY FACTS & CONCEPTS	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
fraction numerator denominator divide multiply favorability score % ideal score compare All of the above have been discussed and defined in earlier objectives.	16.31 Write a fraction using your job score from 16.2 as the numerator and your new ideal job score from 16.1 as the denominator.	Job Score from step 16.23 and Ideal Job Score from step 16.14.
	16.32 Divide the numerator by the denominator to get a decimal fraction.	paper pencil
	16.33 Multiply your answer by 100 and add a "%" sign.	
	16.34 Make the statement: My new favorability score is ____% of my ideal score.	
	16.35 Compare the answer from step 16.34 with answer from step 10.43.	Job favorability sco from step 10.43.
	16.36 Make a statement: My (old or new) favorability score is better for me than my (old or new) favorability score because _______.	

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GOAL 16.0 REEVALUATION OF OCCUPATION WITH REGARD TO CHANGE OF VALUES.
P.O. 16.3

PRINCIPLE If I can determine if a job is suitable for me, then I can decide whether or not to get or keep this job, so that my job life is satisfactory.

TCHR. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS		NOTES & EVALUATION
A prepared example such as Job Score 75, Ideal Job Score 90.	16.31	Tell students to find their Job Score from step 16.23 and Ideal Job Score from step 16.14. Show a job score and ideal score and review their meaning. Form a fraction $\frac{\text{Job Score}}{\text{Ideal Score}}$ e.g. $\frac{75}{90}$.	
Prepared example e.g. $90\overline{)75.00}$ = .83 72.0 3.00 2.70 30	16.32	Tell students to change the fraction to its decimal form by dividing ideal score$\overline{)\text{job score}}$ e.g. $90\overline{)75}$. Remind and show students that they must place a decimal point and annex two zeros behind their job score e.g. $90\overline{)75.00}$. Show how to complete division and remind them to ignore any remainder that may occur.	
.83 x 100 = 83.00 or .83 x 100 = 83. = 83 therefore .83 = 83%	16.33	Remind and model for student, that to change a decimal to a percent you multiply by 100 and add a % sign.	
	16.34	Point out format in student step 16.34 and show a completed statement using your above example.	
Format example prepared using above example. An additional job favorability score such as 72%	16.35	Compare this job favorability score from step 16.33 to your old job favorability score from step 10.43.	
Prepared statement.	16.36	Write a comparative statement about the two job favorability scores using format statement as shown in student step 16.36.	

OBJECTIVE 17.1 USING AT LEAST TWO OF HIS SOURCES FROM P.O. 6.3, THE LEARNER WILL DETERMINE AT LEAST TWO JOBS WHICH ARE PROMOTIONALLY RELATED TO HIS FIRST OCCUPATIONAL ALTERNATIVE.

PRINCIPLE If I can use my sources to determine two promotional possibilities for my chosen job, then I can explore these two jobs, so that I can see if they fit me better than my original job.

VOCABULARY	STUDENT PROCEDURE -(DO STEPS, EXERCISES, ETC)	MATERIALS
FACTS & CONCEPTS __Promotional possibility__- A higher level related job which may be available as the result of any given job.	17.11 Write down name of one information source which will give you information about your first job alternative. (Use information sources from P.O. 6.3.)	
	17.12 Locate the source named in step one.	
	17.13 Using your source of information, complete this sentence: "If I am a (__first job alternative__), then I may become a (__one promotional possibility__).	
	17.14 Repeat steps one through three, using a different information source.	
	17.15 Rewrite this sentence: Two promotional possibilities for my job are ______________ and ________________.	

17.0 INVESTIGATION OF JOB WITH REGARD TO PROMOTIONAL POSSIBILITIES.

P.O. 17.1

PRINCIPLE If you can explore two new jobs, then you can see if they fit you better than your first job, so that yo can determine if you might need more or different training than you had first decided.

TCH. MATERIALS	TEACHER PROCEDURE-(TELL, SHOW, DO METHODS	NOTES & EVALUATIO
	17.11 Tell students to locate information source lists from P.O. 6.3. Have several examples in the room and a transparency. They are the specific sources of information.	
Library or other resource center.	17.12 Using a source of information such as the Occupational Outlook Handbook, show students how you would look for a job title. (This is a review.) Look up a job title. Give students question, "If I am a _______, what can I become?"	
	17.13 Tell students to look under headings such as opportunities for advancement' for information about promotional possibility. Discuss term: Promotional possibilities. Give several oral and written examples of these for a given job. Write format sentence on board, and use a job title and resource to fill in blank.	
	17.14 Remind students they must use two different information sources and two statements for their job title.	
	17.15 Write format sentence on board. Fill in with appropriate information. Have student give another example.	

APPENDIX A

TEST QUESTIONS

MODULE I TEST I

Terminal
Obj. Measured

1.1 1. Write 10 questions using the format "Who____(verb)____", and answer each of the questions with at least 2 job titles.

2.1 2. List and classify at least 20 jobs under each of the headings People and Things.

3.1 3. Make a chart which has 4 categories under People jobs and place at least 5 jobs in each category.

3.2 4. Make a chart which has 4 categories under Thing jobs and place at least 5 jobs in each category.

MODULE II TEST II

4.1 1. Make a chart which contains all 8 categories under People and Things and 5 educational levels. Show how you would use numbers to determine your favored cell.

MODULE III TEST III

6.1 1. List at least 5 people and 5 other job information sources.

2. List your 2 job titles and list at least 4 specific job information sources for each.

MODULE IV TEST IV

7.4 1. Make a Job Requirement Chart, develop a question for each cell and provide a quantified answer for each question.

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MODULE V TEST V

Terminal
Obj. Measured

4.1 1. List at least 3 quantified values under each of 3 headings.

10.2 2. Make a Career Decision Making Chart and compute a job score for at least 2 jobs.

3. Compute your ideal job score.

4. Compute your job favorability score for each of 2 jobs and make a statement which describes what your numbers mean.

MODULE VII TEST VII

12.1 1. Make a self evaluation chart and rate yourself on each of 3 job skills.

13.1 2. Identify a skill which you do not have and write a program that you would use to learn how to do the skill.

14.1 3. Write a principle for each of at least 3 job skills.

MODULE VIII TEST VIII

15.2 1. Using a Career Decision Making Chart, explain how new information can affect favorability of a job.

MODULE IX TEST IX

16.3 1. Using a Decision Making Chart, show and explain how a change in values can affect your job favorability score.

17.1 2. List at least 2 promotional possibilities for your first job alternative.

APPENDIX B

STUDENT-TEACHER PROGRESS CHARTS

STUDENT'S PROGRESS CHART

THIS PROGRESS CHART FOR CAST BELONGS TO ______________________

THINK STEP: IF I CAN CHECK THE FINAL LINE

THEN THESE CAREER SKILLS WILL BE MINE.

P.O. #	Steps											
1.1	1.11	1.12	1.13	1.14								
2.1	2.11	2.12	2.13	2.14								
3.1	3.11	3.12	3.13	3.14	3.15	3.16						
3.2	3.21	3.22	3.23	3.24	3.25							
4.1	4.11	4.12	4.13	4.14	4.15	4.16						
4.2	4.21	4.22	4.23	4.24	4.25	4.26						
5.1	5.11	5.12	5.13	5.14	5.15	5.16						
5.2	5.21	5.22	5.23	5.24	5.25	5.26	5.27					
6.1	6.11	6.12	6.13									
6.2	6.21	6.22	6.23	6.24	6.25							
6.3	6.31	6.32	6.33	6.34								
7.1	7.11	7.12	7.13	7.14	7.15							
7.2	7.21	7.22	7.23	7.24	7.25							
7.3	7.31	7.32	7.33	7.34	7.35	7.36						
7.4	7.41	7.42	7.43	7.44	7.45	7.46						
8.1	8.11	8.12	8.13	8.14	8.15							
9.1	9.11	9.12	9.13	9.14	9.15	9.16						

STUDENT PROGRESS CHART FOR CAST (Con.)

P.O.#	Steps											
10.1	10.11	10.12	10.13	10.14	10.15	10.16	10.17					
10.2	10.21	10.22	10.23	10.24	10.25	10.26	10.27					
10.3	10.31	10.32	10.33	10.34	10.35							
10.4	10.41	10.42	10.43	10.44	10.45	10.46	10.47					
11.1	11.11	11.12	11.13	11.14	11.15							
11.2	11.21	11.22	11.23	11.24	11.25	11.26	11.27	11.28	11.29	11.211	11.212	
11.3	11.31	11.32	11.33	11.34	11.35	11.36	11.37	11.38				
11.4	11.41	11.42	11.43	11.44	11.45	11.46	11.47	11.48	11.49			
12.1	12.11	12.12	12.13	12.14	12.15	12.16	12.17					
13.1	13.11	13.12	13.13	13.14								
13.2	13.21	13.22	13.23	13.24	13.25	13.26						
14.1	14.11	14.12	14.13									
15.1	15.11	15.12	15.13	15.14	15.15							
15.2	15.21	15.22	15.23	15.24	15.25							
16.1	16.11	16.12	16.13	16.14	16.15	16.16	16.17					
16.2	16.21	16.22	16.23									
16.3	16.31	16.32	16.33	16.34	16.35	16.36						
17.1	17.11	17.12	17.13	17.14	17.1							

TEACHER'S PROGRESS CHART	Module I			Module II				Module III				Module IV				Module V								
P.O. #	1.1	2.1	3.1	3.2	4.1	4.2	5.1	5.2	6.1	6.2	6.3	7.1	7.2	7.3	7.4	8.1	9.1	10.1	10.2	10.3	10.4		
Possible Steps	(4)	(4)	(6)	(5)	(6)	(6)	(6)	(7)	(7)	(5)	(4)	(5)	(5)	(6)	(6)	(5)	(6)	(7)	(7)	(5)	(7)		
Students Name																							
1.																							
2.																							
3.																							
4.																							
5.																							
6.																							
7.																							
8.																							
9.																							
10.																							
11.																							
12.																							
13.																							
14.																							
15.																							
16.																							
17.																							
18.																							
19.																							
20.																							

	Module VI				Module VII				Module VIII.		Module IX												
P.O. #	11.1	11.2	11.3	11.4	12.1	13.1	13.2	14.1	15.1	15.2	16.1	16.2	16.3	17.1									
Possible Steps Students Name	(5)	(12)	(8)	(9)	(7)	(4)	(6)	(3)	(5)	(5)	(7)	(3)	(6)	(5)									
21.																							
22.																							
23.																							
24.																							
25.																							
26.																							
27.																							
28.																							
29.																							
30.																							
31.																							
32.																							
33.																							
34.																							
35.																							
36.																							
37.																							
38.																							
39.																							
40.																							

APPENDIX C

STUDENT-TEACHER TEST RESULT CHARTS

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STUDENT TEST RESULTS CHART

Name ______________________

Module	Question	Pre	Post	Gain
One	1			
	2			
	3			
	4			
Two	1			
Three	1			
	2			
Four	1			
Five	1			
	2			
	3			
	4			

STUDENT TEST RESULTS CHART (Con.)

Name ______________________

Module	Question	Pre	Post	Gain
Seven	1			
	2			
	3			
Eight	1			
Nine	1			
	2			

TEACHER TEST RESULTS CHARTS

CAST MODULE I RECORD SHEET

Student Names	Question 1			Question 2			Question 3			Question 4		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												

CAST MODULE I RECORD SHEET (Con.)

Student Names	Question 1			Question 2			Question 3			Question 4		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
18.												
19.												
20.												
21.												
22.												
23.												
24.												
25.												
26.												
27.												
28.												
29.												
30.												
31.												
32.												
33.												
34.												
35.												

BEST COPY AVAILABLE

CAST MODULE II RECORD SHEET

Student Names	Question 1		
	Pre	Post	Gain
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			

CAST MODULE II RECORD SHEET (Con.)

Student Names	Question 1		
	Pre	Post	Gain
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
31.			
32.			
33.			
34.			
35.			

CAST MODULE III RECORD SHEET

Student Names	Question 1			Question 2		
	Pre	Post	Gain	Pre	Post	Gain
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						

BEST COPY AVAILABLE

CAST MODULE III RECORD SHEET (Con.)

Student Names	Question 1			Question 2		
	Pre	Post	Gain	Pre	Post	Gain
18.						
19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						
29.						
30.						
31.						
32.						
33.						
34.						
35.						

CAST MODULE IV RECORD SHEET

Student Names	Question 1		
	Pre	Post	Gain
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			

CAST MODULE IV RECORD SHEET (Con.)

Student Names	Question 1		
	Pre	Post	Gain
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
31.			
32.			
33.			
34.			
35.			

BEST COPY AVAILABLE

CAST MODULE VII RECORD SHEET

Student Names	Question 1			Question 2			Question 3		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									

CAST MODULE VII RECORD SHEET (Con.)

Student Names	Question 1			Question 2			Question 3		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
18.									
19.									
20.									
21.									
22.									
23.									
24.									
25.									
26.									
27.									
28.									
29.									
30.									
31.									
32.									
33.									
34.									
35.									

CAST MODULE V RECORD SHEET

Student Names	Question 1			Question 2			Question 3			Question 4		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gai
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												

CAST MODULE V RECORD SHEET (Con.)

Student Names	Question 1			Question 2			Question 3			Question 4 -		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
18.												
19.												
20.												
21.												
22.												
23.												
24.												
25.												
26.												
27.												
28.												
29.												
30.												
31.												
32.												
33.												
34.												
35.												

CAST MODULE VIII RECORD SHEET

Student Names	Question 1		
	Pre	Post	Gain
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			

CAST MODULE VIII RECORD SHEET (Con.)

Student Names	Question 1		
	Pre	Post	Gain
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
31.			
32.			
33.			
34.			
35.			

CAST MODULE IX RECORD SHEET

Student Names	Question 1			Question 2		
	Pre	Post	Gain	Pre	Post	Gain
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						

CAST MODULE IX RECORD SHEET (Con.)

Student Names	Question 1			Question 2		
	Pre	Post	Gain	Pre	Post	Gain
18.						
19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						
29.						
30.						
31.						
32.						
33.						
34.						
35.						

APPENDIX D

TEACHER SELF EVALUATION CHART FOR LESSON PLAN

TEACHER SELF EVALUATION CHART FOR LESSON PLAN

Directions:

1. Examine your lesson plan.
2. Identify at least one student performance for each of the cells on the chart.
3. Write the student performance in the proper cell.

1. Think Step "What did I have my students do (physically, intellectually, emotionally) through tell, show, and do?"
2. Think Step "Does my lesson plan fill at least two thirds of the cells on the chart?"

	Physical	Intellectual	Emotional
Tell			
Show			
Do			

APPENDIX E

EXPANSION AND INTEREST AREA CHART

PEOPLE JOBS

Goal ________

P.C. ________

Name ____________________

Date ____________________

JOB EXPANSION CHART

	PEOPLE JOBS			
	Business (Contact)	Service	Education	Recreation
More than 4 years of college				
4-year college				
2-year college or training				
High School diploma				
Less than high school				

My f[illegible]d cell of occupations is ________ (educational level) in ____________ (interest area).

My least favored cell of occupations is __________ (educational level) in ____________ (interest area).

Goal ______

P.O. ______

THING JOBS

JOB EXPANSION CHART

Name ______

Date ______

	THING JOBS			
	Business (Detail)	Technology	Science	Outdoor
More than 4 years of college				
4-year college				
2-year college				
High School diploma				
Less than High School				

APPENDIX F

PHYSICAL, INTELLECTUAL AND EMOTIONAL REQUIREMENTS LISTS

Goal_ ____________

P.O.____________

SAMPLE PHYSICAL REQUIREMENT LIST

Name____________________

Date____________________

(Be) Age - The age required to begin or to keep a job. (How old?)

Weight - The amount of weight I have to have to get or keep a job. (How heavy?)

Height - The number of feet and inches I am. (How tall?)

(Do) Flexibility - The amount of time I must spend bending any part of my body. (How flexible?)

Speed - The amount of time I must spend to complete a certain task. (How fast?)

Body Position - The amount of time I must spend in one position. (How long?)

Mobility - The amount of time I must spend moving a part or all of my body. (How often?)

Strength - The amount of time I must exert much energy. (How strong?)

Traveling - The amount of time I must spend away from my home. (How much?)

Personal Appearance - The amount of time I must spend in a certain type of dress. (How long?)

Endurance - The amount of time I must spend doing a tiring task. (How long?)

Working Conditions - The amount of time I must spend in any physical situation. (How long where?)

Cleanliness - The amount of time I must spend with clean hands and clothes. (How clean?)

Salary - The amount of time I must work to [illegible] the money I want. (How much?)

Goal ________

P.O. ________

Name ____________________

Date ____________________

SAMPLE INTELLECTUAL REQUIREMENTS LIST

Math Skills - The amount of time I must spend using mathematics.

Reading Skills - The amount of time I must spend reading.

Knowledge - The amount of time I must spend to gain new information.

Writing - The amount of time I must spend producing written information.

Speaking - The amount of time I must spend giving oral information to others.

Listening - The amount of time I must spend in receiving oral information from others.

Decision Making - The amount of time I must spend in choosing between two or more courses of action.

Planning - The amount of time I must spend to do a task.

Organization - The amount of time I must spend classifying and arranging materials or information.

Learning - The amount of time I must spend gaining new skills.

Creativity - The amount of time I must spend in thinking up new ideas or producing new things.

Goal ____________ Name ____________________

SAMPLE EMOTIONAL REQUIREMENTS LIST

P.O. ____________ Date ____________________

Patience - The amount of time I must spend controlling my temper.

Persistence - The amount of time I must spend on one task without giving up.

Attitude - The amount of time I must spend showing interest in my work.

Commitment - The amount of time I must spend doing tasks that I know will make my job better.

Motivation - The amount of time I must spend working without someone encouraging me.

Independence - The amount of time I must spend without someone telling me what to do.

Responsibility - The amount of time I must make decisions which affect others.

People Contact - The amount of time I must spend working with other people.

Service - The amount of time I must spend doing something for other people.

Competition - The amount of time I must spend trying to do a better job than my fellow workers.

APPENDIX G

JOB REQUIREMENT - JOB DESCRIPTION CHARTS

Goal ____________

P.O. ____________

JOB REQUIREMENT CHART

Name ____________________________

Date ____________________________

Physical	Intellectual	Emotional

Goal ____________

P.O. ____________

JOB DESCRIPTION

CHART

Name ________________________

Date ________________________

Job Title ____________________

Job Question	Physical	Intellectual	Emotional
Who does the job?			
What does (he,she) do?			
Where do they do it?			
When do they do it?			
Why do they do it?			
How do they get to do it?			

APPENDIX H

PHYSICAL, INTELLECTUAL AND EMOTIONAL VALUES LISTS

Goal______________ Name________________________

P.O.______________ Date________________________

SAMPLE PHYSICAL VALUES LIST

(Io)

Flexibility - The amount of time I want to spend bending any part of my body. (How flexible?)

Speed - The amount of time I want to spend to complete a certain task. (How fast?)

Body Position - The amount of time I want to spend in one position. (How long?)

Mobility - The amount of time I want to spend moving a part or all of my body. (How often?)

Strength - The amount of time I want to exert much energy. (How strong?)

Traveling - The amount of time I want to spend away from my home. (How much?)

Personal Appearance - The amount of time I want to spend in a certain type of dress. (How lonb?)

Endurance - The amount of time I want to spend doing a tiring task. (How long?)

Working Conditions - The amount of time I want to spend in any physical situation. (How long where?)

Cleanliness - The amount of time I want to spend with clean hands and clothes. (How clean?)

Salary - The amount of time I want to work to make the money I want. (How much?)

Goal ________

P.O. ____ ____

Name ______________________

Date ______________________

SAMPLE INTELLECTUAL VALUES LIST

Math Skills - The amount of time I want to spend using mathematics.

Reading Skills - The amount of time I want to spend reading.

Knowledge - The amount of time I want to spend to gain new information.

Writing - The amount of time I want to spend producing written information.

Speaking - The amount of time I want to spend giving oral information to others.

Listening - The amount of time I want to spend in receiving oral information from others.

Decision Making - The amount of time I want to spend in choosing between two or more courses of action.

Planning - The amount of time I want to spend to do a task.

Organization - The amount of time I want to spend classifying and arranging materials or information.

Learning - The amount of time I want to spend gaining new skills.

Creativity - The amount of time I want to spend in thinking up new ideas or producing new things.

Goal__________

P.O.__________

Name______________________________

Date ______________________________

SAMPLE EMOTIONAL VALUES LIST

Patience - The amount of time I want to spend controlling my temper.

Persistence - The amount of time I want to spend on one task without giving up.

Attitude - The amount of time I want to spend showing interest in my work.

Commitment - The amount of time I want to spend doing tasks that I know will make my job better.

Motivation - The amount of time I want to spend working without someone encouraging me.

Independence - The amount of time I want to spend without someone telling me what to do.

Responsibility - The amount of time I want to make decisions which affect others.

People Contact - The amount of time I want to spend working with other people.

Service - The amount of time I want to spend doing something for other people.

Competition - The amount of time I want to spend trying to do a better job than my fellow workers.

APPENDIX I

DECISION MAKING CHART

Goal ________

P.C. ________

Name ______________________________

Date ______________________________

DECISION MAKING CHART

Job Title ____________________

Quantified Values	Weights	Favorability Signs	Wt·FS +	Wt·FS -	
Physical					(Do math here.)
Intellectual					
Emotional					
			+Total	-Total	Make statement here:
			Job Score Total ______		

APPENDIX J

PHONE CONTACT PROGRAM

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Name____________________________

Date____________________________

PHONE CONTACT PROGRAM

Step:

1. Write down name, address and telephone number of contact.
2. Dial number.
3. Ask to speak to contact person.
4. Tell him (her) your name.
5. Tell him where you go to school.
6. Tell him you are studying his job and need more information.
7. Tell him your teacher (name) suggested that you call him.
8. Ask him if you can interview him at his place of work sometime within the next few weeks.
9. Ask him if you can watch him do some of the things that he does on his job.
10. If he says, "Yes", proceed to Step 12.
11. If he says, "No", go back to Step 1 and repeat until you find a willing contact.
12. Ask him when you can interview him.
13. Write down the time ________________ _____.
14. Ask him where you will interview him.
15. Write down the place.
16. Ask him how to get there.
17. Write down the directions.
18. Repeat all information to him and ask him if it is correct.
19. Thank him for talking to you.
20. Say good-bye.
21. Hang up phone.

APPENDIX K

PRE-INTERVIEW PROGRAM CHART

Goal ________

P.O. ________

PRE-INTERVIEW
PROGRAM CHART

Name ________________________

Date ________________________

	Physical	Intellectual	Emotional
Day Before			
Night Before			
Morning of			

APPENDIX L

JOB SKILLS, SELF EVALUATION AND STEP CHART

JOB SKILLS CHART

G.S. ____________

F.O. ____________

Name ____________

Date ____________

Job Title ____________

	Job Skill 1	Job Skill 2	Job Skill 3
What does the person do? (Skill)			
When does he do it?			
Where does he do it?			
Why does he do it?			
How well does he have to do it?			
How much time does he spend doing it?			
What are some steps he goes through while he is doing it?			

SELF EVALUATION

CHART

Goal ______________

P.O. ______________

Name ______________________________

Date ______________________________

	1st Job Skill .	2nd Job Skill	3rd Job Skill
3.			
2.			
1.			

Make statement here:

STEP CHART

Name ______________________

Date ______________________

Step 1. Observe someone performing the skill.

(Job Skill)

APPENDIX C

CONSULTING PSYCHOLOGISTS PRESS, INC.

577 College Ave., Palo Alto, Calif. *Tel. 326-4448, Area Code 415*

May 29, 1974

Ms. Judy Battenschlag
Director
Career Achievement Skills Program
Pontiac School District
1530 West Square Lake Road
Pontiac, Michigan 48053

Dear Ms. Battenschlag:

Permission is hereby granted you to adapt and to program for computer scoring the Self-Directed Search and related materials by John L. Holland in a research program known as the Career Achievement Skills Training with the understanding that the attached statement or a substantial equivalent will accompany any printed materials utilizing the SDS or the Occupations Finder.

It is further understood that any adapted materials will not be sold without further written authorization from us.

Sincerely,

John D. Black
President

JDB/jes

enc.

JUNIOR HIGH FINAL VERSION

Student Name ____________________ Date ________

School ____________________

Teacher ____________________

Class Hour ____________________

CAOS

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COMPUTER ASSISTED OCCUPATION SEARCH

Career Achievement Skills Program

Developed cooperatively by Judy Battenschlag, Director of CAST
Al Pavlish, Assistant Director of Pontiac Research and Development Department

Pontiac, Michigan

The following material is essentially derived from the works of Dr. John Holland. The majority of the material comes from Dr. Holland's Self Directed Search (SDS) instrument.

The SDS is copyrighted by Consulting Psychologist's Press, 577 College Ave., Palo Alto, California 94306.

This material is being tested as part of the Career Achievement Skills Training (CAST), a revised Research and Development Project in Vocational Education conducted under Part C of Public Law 90576; a supplementary allocation to the Michigan Department of Education, under OE Letter of Assurance #U-261041-L, subcontracted under Grant Award OEO-0-72-0749.

The purpose of modifying Dr. Holland's SDS instrument was to investigate the following questions:

1. Can the instrument be simplified to be useful for junior high and elementary school students?
2. Can the instrument be modified to facilitate computer scoring of student responses?
3. Can the instrument be modified to be consistent with the processes and objectives of the CAST programs?

This modification of Dr. Holland's instrument is solely intended for limited use as part of the research and development of the CAST program. Anyone wishing to use this material in any way must receive written permission from:

Dr. John Black or
Dr. John Holland
577 College Avenue
Palo Alto, California
94306

ACTIVITIES

Darken the circle (●) under "L" (for LIKE) for those activities you have enjoyed doing or would like to do. Total the number of circles you have darkened.

L REALISTIC

- ○ Fix electrical things
- ○ Repair cars
- ○ Fix mechanical things
- ○ Build things with wood
- ○ Drive a truck or tractor
- ○ Use metalworking or machine tools
- ○ Work on a hot, rod motorcycle or bicycle
- ○ Build models
- ○ Cut out and sew a garment from a pattern
- ○ Take courses in cooking and sewing
- ○ Plant and care for a flower or vegetable garden

○ TOTAL NO. OF L's

L INVESTIGATIVE

- ○ Read science books or magazines
- ○ Work in a science laboratory
- ○ Work on a science project
- ○ Build rocket models
- ○ Work with a chemistry set
- ○ Solve math puzzles
- ○ Play chess
- ○ Work with chemicals
- ○ Take higher math courses
- ○ Study plants and animals
- ○ Read about special subjects on my own

○ TOTAL NO. OF L's

L ARTISTIC

- ○ Sketch, draw or paint
- ○ Attend plays
- ○ Design furniture or buildings
- ○ Play in a band, group or orchestra
- ○ Practice a musical instrument
- ○ Go to concerts or musicals
- ○ Read popular fiction books
- ○ Draw portraits
- ○ Read plays
- ○ Read or write poetry
- ○ Take Art courses

○ TOTAL NO. OF L's

L SOCIAL

- ○ Write letters to friends
- ○ Attend services at a church or temple (ex. - scouts, church youth groups, youth divisions of political parties, recreation leagues)
- ○ Help others with their personal problems
- ○ Take care of children
- ○ Go to parties
- ○ Dance
- ○ Read books about people and the way they act
- ○ Play team sports
- ○ Go to sports events
- ○ Make new friends

○ TOTAL NO. OF L's

L ENTERPRISING

- ○ Convince others to do what you want
- ○ Sell something
- ○ Discuss current events
- ○ Operate my own service or business
- ○ Attend a weekend meeting
- ○ Give talks
- ○ Serve as an officer of any group
- ○ Show others how to do or make something
- ○ Meet important people
- ○ Be a group leader
- ○ Help a friend running in a school election

○ TOTAL NO. OF L's

L CONVENTIONAL

- ○ Keep your desk and room neat
- ○ Type papers or letters for yourself or for others
- ○ Add, subtract, multiply and divide numbers in business
- ○ Operate office machines of any kind
- ○ Keep detailed records of expenses
- ○ Take a Typing course
- ○ Work in the office
- ○ Take a Business Math course
- ○ Assist the teacher with correcting papers
- ○ Put letters, reports, records in order
- ○ Write business letters

○ TOTAL NO. OF L's

COMPETENCIES

Darken the circle (●) under "Y" (for Yes) for those activities you can do well. Total the number of circles you have darkened.

Y REALISTIC

O I have used wood shop power tools such as a power saw and lathe
O I can adjust engine parts
O I have operated metal shop power tools such as a drill press or grinder
O I can refinish furniture or woodwork
O I can cook a meal using recipes
O I can cut out a dress using a pattern
O I can grow flowers and/or vegetables
O I can plan and shop for a week's meals
O I can make simple electrical repairs
O I can repair children's toys

○ TOTAL NO. OF Y's

Y INVESTIGATIVE

O I can name three foods that are high in protein content
O I understand how electromagnet works
O I understand photosynthesis
O I can use multiplication tables
O I can use a ruler to measure
O I can locate a street using a map
O I can identify some constellations of the stars
O I can describe the job of the white blood cells
O I understand the use of cross references in a dictionary or encyclopedia
O I use the telephone directory to locate people and services

○ TOTAL NO. OF Y's

Y ARTISTIC

O I can play a musical instrument
O I can sing in a choir
O I can perform as a musical soloist
O I can act in a play
O I can do a painting or sculpture
O I can do modern or ballet dancing
O I can sketch people so that they can be recognized
O I can make pottery
O I can design clothing, posters, or furniture
O I write stories or poetry well

○ TOTAL NO. OF Y's

Y SOCIAL

O I am good at explaining things to others
O I have helped earn money for charity or a walkathon
O I cooperate and work well with others
O I can be a good host (hostess)
O I can teach children easily
O I can plan entertainment for a party
O I am good at helping people who are upset or troubled
O I have worked as a volunteer aide in a hospital, clinic, or home
O I am a good judge of people
O I can plan school or church social affairs

○ TOTAL NO. OF Y's

Y ENTERPRISING

O I have been elected to an office in school
O I can help others do or make something
O I am good at getting people to do things my way
O I know how to set a goal and plan a course of action to reach it
O I know how to get help when I can't do a job by myself
O I have acted as a spokesman for some group in presenting suggestions or complaints to a person in authority
O I won an award for work as a salesman or leader
O I have started a club, group, or gang
O I can figure out different ways of getting a job done
O I know how to be a successful leader

○ TOTAL NO. OF Y's

Y CONVENTIONAL

O I can organize the tools and materials in a school or home shop
O I can predict and plan most of my income and expenses for the next month
O I can alphabetize and shelve books in a library
O I can put letters or reports in order
O I have held an office job
O I can organize my room
O I can do a lot of paper work in a short time
O I can use an adding machine
O I have been treasurer of a group
O I can keep records of my expenses

○ TOTAL NO. OF Y's

OCCUPATIONS

This is an inventory of your feelings and attitudes about many kinds of work. Show the occupations that interest or appeal to you by darkening the circle (●) under the "Y" for Yes.

Y REALISTIC

○ Airplane Mechanic
○ Fish and Wildlife Specialist
○ Green House Operator
○ Medical Lab Technician
○ Construction Inspector
○ Radio Operator
○ Filling Station Attendant
○ Tool Designer
○ Sewing Instructor
○ Electrician

○ TOTAL NO. OF Y's

Y INVESTIGATIVE

○ Biologist - Studies the human body
○ Census Taker
○ Anthropologist - Studies earth's history of men
○ Zoologist - Works with animals
○ Chemist - Works with chemicals
○ Market researcher - Studies people's opinions
○ Writer of Scientific Articles
○ Investigator of fire or auto insurance claims
○ Geologist - Works with rocks and minerals
○ Botanist - Works with plants

○ TOTAL NO. OF Y's

Y ARTISTIC

○ Poet
○ Musician
○ Author of Books
○ Commercial Artist
○ Newspaper Art, Music or Drama Critic
○ Art Gallery Owner
○ Singer
○ Composer
○ Writer of Plays
○ Theatre Stage Manager

○ TOTAL NO. OF Y's

Y SOCIAL

○ Religious Worker
○ High School Teacher
○ Nurse
○ Speech Therapist
○ Physical Education Teacher
○ Playground Director
○ Psychologist
○ Social Science Teacher
○ Asst. City School Superintendent
○ Counselor

○ TOTAL NO. OF Y's

Y ENTERPRISING

○ Advertising Agent
○ Store Owner
○ Television Producer
○ Hotel Manager
○ Business Executive
○ Restaurant Worker
○ Master of Ceremonies
○ Salesman
○ Announcer
○ Political Campaign Manager

○ TOTAL NO. OF Y's

Y CONVENTIONAL

○ Librarian
○ Treasurer
○ Traffic Manager
○ Mathematician
○ Court Secretary
○ Bank Teller
○ Tax Expert
○ Computer Operator
○ Payroll Clerk
○ Bank President

○ TOTAL NO. OF Y's

Darken the circle next to the occupational area in which you are most interested.

○ Science

○ Outdoor

○ Recreation

○ Education

○ Business (Detail)

○ Technology

○ Business (Contact)

○ Service

Darken the circle next to the highest educational level you plan to attend.

○ Less than High School

○ High School Diploma

○ High School plus some training
(Junior College, Trade School)

○ College Degree (four years)

○ More than four years of College

SELF-ESTIMATES

Rate yourself on each of the following traits as you see yourself when compared with other persons your own age. Give the most accurate estimate of how you see yourself. Circle the appropriate number and try not to rate yourself the same in each ability.

	MECHANICAL ABILITY	SCIENTIFIC ABILITY	ARTISTIC ABILITY	TEACHING ABILITY	SALES ABILITY	CLERICAL ABILITY
HIGH	5	5	5	5	5	5
	4	4	4	4	4	4
AVERAGE	3	3	3	3	3	3
	2	2	2	2	2	2
LOW	1	1	1	1	1	1
	0	0	0	0	0	0

	MANUAL ABILITY	MATH ABILITY	MUSICAL ABILITY	FRIENDLINESS	MANAGERIAL ABILITY	OFFICE ABILITY
HIGH	5	5	5	5	5	5
	4	4	4	4	4	4
AVERAGE	3	3	3	3	3	3
	2	2	2	2	2	2
LOW	1	1	1	1	1	1
	0	0	0	0	0	0

APPENDIX E

CONTRACT BETWEEN EDUCATIONAL SERVICES AND PRODUCTS INC., AND THE SCHOOL DISTRICT OF THE CITY OF PONTIAC, MICHIGAN.

1. PARTIES TO THE CONTRACT

This contract sets forth the relationship between The School District of the City of Pontiac, Michigan, and Educational Services and Products Inc., Kalamazoo, Michigan, for the period beginning July 1, 1973 through June 30, 1974, for certain third-party evaluation services to a project entitled "Human and Computer Assisted Guidance Program", formerly entitled "CCEM Computer Assisted Guidance Program", conducted under Part C of Public Law 90-576 and funded through the Michigan Department of Education under OE Letter of Assurance (project) No. V-261041-L, Grant Award OEO-0-72-0749, the plan being dated August 1972 (revised February 1973).

2. STAFF

Dr. Theodore L. Ploughman will be the Educational Services and Products Inc., staff member primarily responsible for the conduct of the terms of this contract.

3. SCOPE OF SERVICES

A. The focus of Dr. Ploughman's evaluation is based on a) the general objectives for Phases II and III of this project as found in pages 5-13 in Appendix A "Plan for Phases II and III" (hereto attached as Appendix I and made part of this agreement) and on b) the detailed objectives for implementation of this plan as described on page four in the "Plan for Phase III" (hereto attached as Appendix II and made a part of this agreement).

Dr. Ploughman's evaluation function will include auditing and verifying all data collection assumed by the Pontiac Research and Development Department as well as Carkhuff Associates, Inc. In addition he will react and make recommendations based on the project results.

The services and/or materials which Dr. Ploughman agrees to provide are as follows:

1. Reviews student skill objectives by grade level.
2. Reviews and critiques evaluation design.
3. Recommends evaluation design changes, if necessary.
4. Reviews, critiques and assists in developing all evaluation instruments and data analysis procedures.
5. Monitor all evaluation activities.
6. Submits written reports containing reviews, critiques and recommendations. Reports will be due on October 10, 1973, January 10 and June 10, 1974.

B. The CAST Program Director and Pontiac Research and Development Department will cooperate with Dr. Ploughman in the following ways:

1. A mutually acceptable evaluation design will be initiated by the Pontiac Research and Development Department.
2. Recommendations for and development of all evaluation instruments will be cooperatively undertaken by the Pontiac Research and Development Department and Dr. Ploughman.
3. All data collected by Carkhuff Associates and the Pontiac Research and Development Department will be made available to Dr. Ploughman.
4. All data collected will be analyzed by the Pontiac Research and Development Department.
5. Written status reports of local program evaluation efforts will be due to Dr. Ploughman by the tenth of each month.

4. COMPENSATION

Dr. Ploughman will be paid $100 for each of 12 on-site visits and $100 for each of 12 program planning and materials development days. Included in these fees are all administrative and materials costs.

5. METHOD OF PAYMENT

Payment will be made in three installments in October, January and June for services actually performed and/or products delivered. The final installment will be no less than 10% of the total amount and will be paid upon receipt and approval of the final report. The total amount of this contract shall not exceed Twenty-four Hundred dollars. ($2400)

6. MEETINGS

Representatives from Pontiac Research and Development Department and the CAST Project Driector will meet with Dr. Ploughman on the first Monday of each month or on an alternate day agreed upon by both parties. These meetings will begin September 1973.

7. CANCELLATION

This contract may be cancelled by either party with 30 days written notice.

8. EQUAL OPPORTUNITY CLAUSE

Dr. Ploughman, in the performance of this contract, will comply with the Equal Opportunity Clause - HEW 386 (Section 202, Executive Order 11246, September 24, 1965, 30 FR 11269) as revised May 1966. As certification to that effect, a copy of that clause, signed by Dr. Ploughman is attached as Appendix III and made a part of this agreement.

9. ADMINISTRATIVE CONTROL

It is agreed, that the School District of the City of Pontiac shall retain administrative control over the provision of services and/or materials under this agreement.

10. EVALUATION REPORTS

All reports of evaluation activities and findings will be presented jointly to the Project Director and the Community Action Program Office. The evaluation reports will be written in compliance with the following reference:

Preparing Evaluation Reports: A Guide for Authors, 68 pp., 1970.

All information and findings will be held in confidence by Dr. Ploughman. Any publicity, journal articles or other printed matter of a dissemination nature will be presented to the Director of Community Action Programs, or his designated representative for concurrence and approval prior to publication or research.

11. CONCURRENCE

This agreement becomes in force upon signature of both parties and approval of the U.S. Office of Education.

EDUCATIONAL SERVICES AND PRODUCTS INC.

by Theodore Ploughman
Theodore Ploughman
Evaluation Consultant

THE SCHOOL DISTRICT
OF THE CITY OF PONTIAC

by Arnold Embree
Arnold Embree
Director of Pupil Personnel
Services

EQUAL EMPLOYMENT OPPORTUNITY

(Section 202, Executive Order 11246, September 24, 1965, 30 FR 11269)

"During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Providing, however, That in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States."

HEW-386
Rev. 5-66

Theodore [illegible]

Date Oct 25, 1975

CONTRACT BETWEEN THE SCHOOL DISTRICT OF THE CITY OF PONTIAC AND CARKHUFF ASSOCIATES INC.

1. PARTIES TO THE CONTRACT

This contract sets forth the relationship between The School District of City of Pontiac, Michigan, and Carkhuff Associates, Inc., Amherst, Massachusetts, for the period beginning July 1, 1973 through June 30, 1974, for services and products provided to the "Human and Computer Assisted Career Achievement Skills Program" (formerly "CCEM Computer Assisted Guidance Program") conducted under Part C of Public Law 90-576 and funded through the Michigan Department of Education under OE Letter of Assurance (project) No. V-261041-L, Grant Award OEO-0-72-0749, the plan being dated August 1972 (revised February 1973).

2. SCOPE OF SERVICES

The services and/or materials which Carkhuff Associates, Inc., agree to provide shall be directed toward the accomplishment of general objectives for staff, program and computer as stated on pages 5-13 in Appendix A for "Plan for Phases II and III" and the specific objectives stated on page four in the "Plan for Phase III" hereto attached as Appendix I and II respectively, and made a part of this agreement. It is understood that the term "evaluation" as used in this agreement shall include, but not be limited to, data gathering; analysis and interpretation as may be necessary to provide guidance to the development of programs, to the conduct of the staff training, and to the development of computer support systems, except that any such activities by Carkhuff Associates shall not duplicate nor supplant nor be a substitute for a third-party evaluation as provided in a contract between Dr. Theodore Ploughman and The School District of

City of Pontiac for the period July 1, 1973 through June 30, 1974 inclusive. It is further understood that the third-party evaluator shall have ready, complete, and timely access to data, in both new and processed forms, and to analysis of data which are collected and analyzed by Carkhuff Associates and the Pontiac Research and Development Department under terms of this agreement and which are necessary for the third-party evaluator to fulfill his contractual obligations to this project.

The services which Carkhuff Associates will provide include the following:

A. Consulting and Training - 75 days

Human Resources Development Skills Training will be conducted for trainers, 1972-73 trainees, 1973-74 trainees, and administrators. This training will include Interpersonal Skills, Educational Skills and Career Skills as detailed in the Art of Helping, Art of Problem Solving, Art of Teaching and Art of Developing a Career by Dr. Robert Carkhuff. Pre-post training measurements will be made. Also, included as part of training will be onsite classroom observations, project planning and followup training.

B. Program Planning and Development - 32 days

This includes planning and developing the following training programs:

1. Trainer programs
2. Trainee programs
3. Observation programs
4. Teacher-Counselor support programs
5. Human, Educational and Career Modules
6. Administrative Modules

Other program planning services include the following:

1. Assistance in Developing Computerized Occupational Information Retrieval System.
2. Evaluation and recommendations for model lesson plan development.
3. Phase III report generation, which includes dissemination programs.

C. Materials Service

This includes manuals, books (Art of Helping, Art of Problem Solving, Art of Teaching and Art of Developing a Career) and specific programs as they become appropriate to facilitate the delivery of the above services.

D. Administrative Services

This includes secretarial, clerical, communication, billing and correspondence services.

3. COMPENSATION

The fee structure for Carkhuff Associates services is as follows:

A. Consulting Services @ $150 per man per day (8 hours).[1]

1. Evening work above and beyond a normal work day is charged at time and one half.
2. Traveling time to and from a work site is charged as a consulting service.

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[1] The $150.00 per man day rate had been previously approved by Mr. Otis Roberts on November 1, 1972, based on the rational presented by Mr. R.W. Nunez in a letter to Dr. Sidney High dated August 18, 1972.

B. Program Development Services @ $150 per man per 8-hour day.

C. Materials at a per item rate.

D. Administrative Service at 25% of the total of the above three services.

E. Daily expenses at $50 per man per day.

F. Air travel expenses at cost. These expenses will be proportioned over all Michigan projects where appropriate.

The fee estimate for the preceeding services is $28,312.00.

Consulting and Training Visits @ $150 (75 days)	$11,250.00
Program Development Services @ $150 (32 days)	4,800.00
Materials (approx. 80 people @ $25 average)	2,000.00
	$18,050.00
Administrative expenses @ 25%	4,512.00
Daily Expenses @ $50 (75 days)	3,750.00
Air Travel Expenses @ $100 (20 days)	2,000.00
	$28,312.00

4. METHOD OF PAYMENT

Upon approval of this contract by the U.S. Office of Education and the Michigan State Department of Education, Carkhuff Associates will be paid in monthly installments for services actually performed and/or products delivered. The final installment shall be 10% of the total amount and will be paid upon receipt and approval of the final report. The total amount of this contract shall not exceed Twenty-eight Thousand, Three Hundred and Twelve Dollars ($28,312).

5. CANCELLATION

This contract may be cancelled by either party with 30 days written notice.

6. EQUAL OPPORTUNITY CLAUSE

Carkhuff Associates, Inc., in the performance of this contract, as amended, will comply with the Equal Opportunity Clause - HEW 386 (Section 202, Executive Order 11246, September 24, 1965, 30 FR 11269) as revised May 1966. As certification to that effect, a copy of that clause, signed by the president of Carkhuff Associates, Inc., is attached as Appendix III and made a part of this agreement.

7. ADMINISTRATIVE CONTROL

It is agreed, that the School District of the City of Pontiac shall retain administrative control over the provision of services and/or materials under this agreement.

8. OWNERSHIP OF MATERIALS

Ownership of the final form of any material or processes uniquely developed and produced for use in this project is held by this project. The term "final form of any material or processes" refers to graphic or audial, verbal or nonverbal material, measuring instruments, devices, or processes or other products, or any combination thereof, which is necessary to the transportability of all or any part of the final products of the project in other school districts or schools within the Pontiac School District and to the effective and economical implementation of all or any part of those final products in those school districts or schools. The determination of "necessary", as used in the previous statement, shall be made by the interpretation of trials and pilot tests of the products and processes developed to meet the project objectives and/or by the reasonable judgment of the project director and her staff.

Nothing in the above statements implies any claim against the essential technology on which the materials and processes may be based, nor against any intermediate materials or processes which may have been developed in arriving at the final form of those materials or processes, nor against any basic technology which Carkhuff Associates, Inc., may have developed in the course of this project or as a result of having been involved in the project.

This agreement becomes in force upon signature of both parties and approval of the U. S. Office of Education.

CARKHUFF ASSOCIATES, INC.

by
Robert R. Carkhuff, Ph. D
President

THE SCHOOL DISTRICT OF THE
CITY OF PONTIAC

by
Arnold Embree
Director of Pupil Personnel Services

EQUAL EMPLOYMENT OPPORTUNITY

(Section 202, Executive Order 11246, September 24, 1965, 30 FR 11269)

"During the performance of this contract, the contractor agrees as follows:

> (1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
>
> (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
>
> (3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
>
> (4) The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
>
> (5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: *Providing*, *however*, That in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States."

HEW-386
Rev. 5-66

Robert R Carkhuff

Date 25 October 1973

APPENDIX G

MODULE I TEST I

Terminal
Obj. Measured

1.1 1. Write 10 questions using the format "Who ___(Who)___", and answer each of the questions with at least 2 job titles.

2.1 2. List and classify at least 20 jobs under each of the headings People and Things.

3.1 3. Make a chart which has 4 categories under People jobs and place at least 5 jobs in each category.

3.2 4. Make a chart which has 4 categories under Things jobs and place at least 5 jobs in each category.

MODULE II TEST II

4.1 1. Make a chart which contains all 8 categories under People and Things and 5 educational levels. Show how you would use numbers to determine your favored cell.

MODULE III TEST III

6.1 1. List at least 5 people and 5 other job information sources.

2. List your 2 job titles and list at least 4 specific job information sources for each.

MODULE IV TEST IV

7.4 1. Make a Job Requirement Chart, develop a question for each cell and provide a quantified answer for each question.

MODULE V TEST V

8.1 1. List at least 3 quantified values under each of 3 headings.

10.2 2. Make a Career Decision Making Chart and compute a job score for at least 2 jobs.

3. Compute your ideal job score.

4. Compute your job favorability score for each of 2 jobs and make a statement which describes what your numbers mean.

MODULE VII TEST VII

12.1 1. Make a self evaluation chart and rate yourself on each of 3 job skills.

13.1 2. Identify a skill which you do not have and write a program that you would use to learn how to do the skill.

14.1 3. Write a principle for each of at least 3 job skills.

MODULE VIII TEST VIII

15.2 1. Using a Career Decision Making Chart, explain how new information can affect favorability of a job.

MODULE IX TEST IX

16.3 1. Using a Decision Making Chart, show and explain how a change in values can affect your job favorability score.

17.1 2. List at least 2 promotional possibilities for your first job alternative.

Goal 1.0 - Expanding Job Titles

P.O. 1.1:

Question

1. Write at least 10 questions using the format "Who (verb)?"

   Answer each question with at least 2 job titles.

Scoring

Points

5. a Write at least 21 Who (verb) questions.
   b Answers each question with at least 4 job titles.

4. a Write at least 11 Who (verb) questions.
   b Answers each questions with at least 3 job titles.

3. a Write at least 10 Who (verb) questions.
   b Answers each question with at least 2 job titles.

2. a Write at least 5 Who (verb) questions.
   b Answers each questions with at least 1 job title.

1. a Write at least 1 Who (verb) question.
   b Answers each question with at least 1 job title.

0. Anything else.

Discriminations

a. Verbs must describe something a person does.

b. Job titles must be such that you could look the title up in an Occupational Resource Book and find number used.

Goal 2.0 - Expanding and Classifying Jobs - People-Things

P.O. 2.1:

Question

2. Classify at least 20 jobs under People heading.

   Classify at least 20 jobs under Thing heading.

Scoring

Points

5. a Lists at least 31 people jobs under People heading.
   b Lists at least 31 thing jobs under Thing heading.

4. a Lists at least 21 people jobs under People heading.
   b Lists at least 21 thing jobs under Thing heading.

3. a Lists at least 20 people jobs under People heading.
   b Lists at least 20 thing jobs under Thing heading.

2. a Lists at least 10 people jobs under People heading.
   b Lists at least 10 thing jobs under Thing heading.

1. a Lists at least 1 people job under People heading.
   b Lists at least 1 thing job under Thing heading.

0. Anything else.

Discriminations

a. People Jobs - Spends 50% or more time working with people.

b. Thing Jobs - Spends 50% or more time working with things.

Module 1 - Question 3

Goal 3.0 - Expand and Classify Jobs - Interest Area

P.O. 3.1:

Question

3. Make a chart called People Jobs.

List four categories under it.

List 5 job titles in each category.

Scoring

Points

5. a Makes chart called People Jobs.
   b Lists four categories.
   Service - Education - Business Contact - Recreation
   c Lists at least 11 people jobs in each category.

4. a Makes chart called People Jobs.
   b Lists four categories.
   Service - Education - Business Contact - Recreation
   c Lists at least 6 people jobs in each category.

3. a Makes chart called People Jobs.
   b Lists four categories.
   Service - Education - Business Contact - Recreation
   c Lists at least 5 people jobs in each category.

2. a Makes chart called People Jobs.
   b Lists four categories.
   Service - Education - Business Contact - Recreation
   c Lists at least 3 people jobs in each category.

1. a Makes chart called People Jobs.
   b Lists any 3 categories.
   c Lists at least 2 people jobs in each category.

C. Anything else.

Discriminations

1. Jobs listed under interest must relate to definition of people interest areas given in book.
   a. Service - Occupation in which one person helps another.
   b. Education - Occupation in which one person teaches or trains another.
   c. Business (Contact) - Face to face business concerning one person attempting to persuade another.
   d. Recreation - Occupation in which one person is responsible for providing leisure activity for others.

Goal 3.0 - Expand and Classify Jobs - Interest Area

P.O. 3.2:

Question

3. Make a chart called Thing Jobs.

List four categories under it.

List 5 job titles in each category.

Scoring

Points

5. a Makes chart called Thing Jobs.
   b Lists four categories.
      Business Detail, Technology, Outdoors, Science
   c Lists at least 11 thing jobs in each category.

4. a Makes chart called Thing Jobs.
   b Lists four categories.
      Business Detail, Technology, Outdoors, Science
   c Lists at least 6 thing jobs in each category.

3. a Makes chart called Thing Jobs.
   b Lists four categories.
      Business Detail, Technology, Outdoors, Science
   c Lists at least 5 thing jobs in each category.

2. a Makes chart called Thing Jobs.
   b Lists four categories.
      Business Detail, Technology, Outdoors, Science
   c Lists at least 3 thing jobs in each category.

1. a Makes chart called Thing Jobs.
   b Lists any 3 categories.
   c Lists at least 2 thing jobs in each category.

0. Anything else.

Discriminations

1. Jobs listed under interest must relate to definition of thing interest areas given in book.
   a. Business (Detail)- Occupations in which people organize information.
   b. Technology - Occupations involving the production, maintenance and transportation of goods.
   c. Outdoors - Occupations involving the care and preservation of natural resources, plants and animals.
   d. Science - Occupations which involve the use of research for the purpose of developing or verifying information.

Goal 5.0 - Choosing a Set of Occupations to Explore

P.O. 5.1:

Question

1. Make a chart with People and Thing heading.
   List eight categories.
   List five educational levels.
   Make a statement concerning your favored cell explaining reason for choice.

Scoring

Points

5. a Makes chart with People and Thing heading.
   b Lists four categories under People.
   Service - Educational - Business (Contact) - Recreation
   c Lists four categories under Things.
   Business (Detail) - Technology - Outdoors - Science
   d Lists five educational levels.
   e Weights one category 1, one 10, and the rest using numbers 2-9.
   f Weights one educational level 1, one 10, and the rest using numbers 2-9.
   g Multiplies each category weight by each education level weight.
   h Writes product of weights in each cell.
   i Makes the following statement:
   "My favored cell of occupations is (interest area) in (level of education) because the number in my highest cell shows the highest relationship between my best liked interest area and educational level."

4. a Makes chart with People and Thing heading.
   b Lists four categories under People.
   Service - Educational - Business (Contact) - Recreation
   c Lists four categories under Things.
   Business (Detail) - Technology - Outdoors - Science
   d Lists five educational levels.

Discriminations

The five educational levels are:
1. Less than High School
2. High School Diploma
3. High School plus training (Jr. College, Trade School)
4. College Degree
5. More than four years of college.

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e Weights one category 1, one 10, and the rest using numbers 2-9.
f Weights one educational level 1, one 10, and the rest using numbers 2-9.
g Multiplies each category weight by each education level weight.
h Writes product of weights in each cell.
i Makes the following statement:
"My favored cell of occupations is (interest area) in (education level) because it is the cell with the highest number.

3. a Makes chart with People and Thing heading.
b Lists four categories under People.
Service - Educational - Business (Contact) - Recreation
c Lists four categories under Things.
Business (Detail) - Technology - Outdoors - Science
d Lists five educational levels.
e Weights one category 1, one 10, and the rest using numbers 2-9.
f Weights one educational level 1, one 10, and the rest using numbers 2-9.
g Multiplies each category weight by each education level weight.
h Writes product of weights in each cell.
i Makes the following statement:
"My favored cell of occupation is (education level) in (interest area) because I like what people in (this interest area) do and I want (amount of education).

2. a Makes chart with People and Thing heading.
b Lists four categories under People.
Service - Educational - Business (Contact) - Recreation
c Lists four categories under Things.
Business (Detail) - Technology - Outdoors - Science
d Lists five educationa levels.
e Weights one category 1, one 10, and the rest using numbers 2-9.
f Weights one educational level 1, one 10, and the rest using numbers 2 - 9.

Module II - Question 1 (Con.)

1. a Makes chart with People and Thing heading.
   b Lists four categories under People.
     Service - Educational - Business (Contact) - Recreation
   c Lists four categories under Things.
     Business (Detail) - Technology - Outdoors - Science
   d Lists five educational levels.

O. Anything else.

Module III Question 1

Goal 6.0 - Developing Awareness of Job Source

P.O. 6.1:

Question

1. List at least five People information sources.

   List at least five other job information sources.

Scoring

Points

5. List at least 11 people and 11 other job information sources.
4. List at least 6 people and 6 other job information sources.
3. List at least 5 people and 5 other job information sources.
2. List at least 3 people and 3 other job information sources.
1. List at least 1 people and 1 other job information source.
0. Anything else.

Discriminations

a People Source - Someone who can provide information.

b Thing Source - Something which can provide information.

Module III - Question 2

Goal 6.0 - Developing Awareness of Job Source

P.O. 6.1:

Question

1. List two job titles.

   List four specific job information sources.

Scoring

Points

5. Lists 2 job titles and at least 9 specific sources.

4. Lists 2 job titles and at least 5 specific sources.

3. Lists 2 job titles and at least 4 specific sources.

2. Lists 2 job titles and at least 2 specific sources.

1. Lists 2 job titles and at least 1 specific sources.

0. Anything else.

Discriminations

1. Specific source gives name, a title, so well that you could go right to the source.

Module IV - Question 1

Goal 7.0 - Developing and Using Questions to Obtain Information About Jobs

P.O. 7.4:

Question

Make a Job Description Chart

Develop at least 6 questions

State the answer to each question in a measurable way.

Scoring

Points

5. a Lists job title.
   b Lists Physical, Intellectual and Emotional categories.
   c Lists 6 job questions using who, what, when, where, why and how.
   d Lists 3 measurable answers for each question.

4. a Lists job title.
   b Lists Physical, Intellectual and Emotional categories.
   c Lists 6 job questions using who, what, when, where, why and how.
   d Lists 2 measurable answers for each question.

3. a Lists job title.
   b Lists Physical, Intellectual and Emotional categories.
   c Lists 6 job questions using who, what, when, where, why and how.
   d Lists 1 measurable answer for each question.

2. a Lists job title.
   b Lists Physical, Intellectual and Emotional categories.
   c Lists 6 job questions using who, what, when, where, why and how.

1. a Lists job title.
   b Lists Physical, Intellectual and Emotional categories.

0. Anything else.

Goal 8.0 - Identify Occupational Values, P.I.E.

P.O. 8.1:

Question

1. List 3 value headings.

   List 3 values under each heading.

Scoring

Points

5. Lists at least 7 measurable (by time) values under each Physical, Intellectual and Emotional heading.

4. Lists at least 4 measurable (by time) values under each Physical, Intellectual and Emotional heading.

3. Lists at least 3 measurable (by time) values under each Physical, Intellectual and Emotional heading.

2. Lists at least 2 measurable (by time) values under each Physical, Intellectual and Emotional heading.

1. Lists at least 1 measurable (by time) values under each Physical, Intellectual and Emotional heading.

0. Anything else.

Module V - Question 2

Goal 10.0 - Evaluation of Job Based on Personal Occupational Values

P.O. 10.2:

Question

1. Make 2 Career Decision Making Charts.

   Compute a job score for two jobs.

   Make a statement about your two jobs.

Scoring

Points

5. a Lists job title.
   b Lists 6 occupational values.
   c Lists weights for each value.
   d Lists favorability signs for each value.
   e Adds weight for each "+" value.
   f Writes the sum as a positive number next to the favorability sign.
   g Adds weight for each "-" value.
   h Writes the sum as a negative number next to the favorability sign.
   i Adds all positive numbers.
   j Adds all negatives numbers.
   k Subtracts "-" scores from "+" scores.
   l Records answer as job score.
   m Repeats steps a-m for second job.
   n Makes a statement like:
   "(Job Title) is my favored job because the larger number shows
   there is a greater relationship between my occupational values
   and what (job title) requires of me than (the other job title)."

4. a Lists job title.
   b Lists 6 occupational values.
   c Lists weights for each value.
   d Lists favorability signs for each value.
   e Adds weight for each "+" value.
   f Writes the sum as a positive number next to the favorability sign.

g Adds weight for each "-" value.
h Writes the sum as a negative number next to the favorability sign.
i Adds all positive numbers.
j Adds all negative numbers.
k Subtracts "-" scores from "+" scores.
l Records answer as job score.
m Repeats steps a-m for second job.
n Makes a statement like:
"(Job Title) is my favored job because it has a larger number than (the other job title)."

3. a Lists job title.
b Lists 6 occupational values.
c Lists weights for each value.
d Lists favorability signs for each value.
e Adds weight for each "+" value.
f Writes the sum as a positive number next to the favorability sign.
g Adds weight for each "-" value.
h Writes the sum as a negative number next to the favorability sign.
i Adds all positive numbers.
j Adds all negative numbers.
k Subtracts "-" scores from "+" scores.
l Records answer as job score.
m Repeats steps a-m for second job.
n Makes a statement like:
"(Job Title) is my favored job because I like it better than (the other job title)."

2. a Lists job title.
b Lists 6 occupational values.
c Lists weights for each value.
d Lists favorability signs for each value.
e Adds weight for each "+" value.
f Writes the sum as a positive number next to the favorability sign.
g Adds weight for each "-" value.
h Writes the sum as a negative number next to the favorability sign.
i Adds all positive numbers.

Module V - Question 2 (Con.)

1. a Lists job title.
   b Lists 6 occupational value.
   c Lists weights for each value.
   d Lists favorability signs for each value.

0. Anything else.

3. a Lists job title.
   b Lists 6 occupational values.
   c Lists weights for each value.
   d Lists a "++" favorability sign for each occupational value.
   e Adds weight for each "++" value.
   f Writes the sum as a positive number next to the favorability sign.
   g Adds all positive numbers.
   h Records answer as ideal job score.
   i Makes a statement:
      "My ideal job score is _________ because it is a large number.

2. a Lists job title.
   b Lists 6 occupational values.
   c Lists weights for each value.
   d Lists a "++" favorability sign for each occupational value.
   e Adds weight for each "++" value.
   f Writes the sum as a positive number next to the favorability sign.

1. a Lists job title.
   b Lists 6 occupational values.
   c Lists weights for each value.
   d Lists a "++" favorability sign for each occupational value.

0. Anything else.

Module V - Question 3

Goal 10.0 - Evaluation of Job Based on Personal Occupational Values

P.O. 10.3:

Question

1. Figure your ideal job score.

Scoring

Points

5. a Lists job title.
   b Lists 6 occupational values.
   c Lists weights for each value.
   d Lists a "++" favorability sign for each occupational value.
   e Adds weight for each "++" value.
   f Writes the sum as a positive number next to the favorability sign.
   g Adds all positive numbers.
   h Records answer as ideal job score.
   i Makes a statement:
   "My ideal job score is ________ because all my favorability sings are numbers which indicates a perfect match between my occupational values and the job requirements."

4. a Lists job title.
   b Lists 6 occupational values.
   c Lists weights for each value.
   d Lists a "++" favorability sign for each occupational value.
   e Adds weight for each "++" value.
   f Writes the sum as a positive number next to the favorability sign.
   g Adds all positive numbers.
   h Records answer as ideal job score.
   i Makes a statement:
   "My ideal job score is ________ because all my favorability signs are "++'s".

e Adds % sign.
f Repeats steps b-c for second job alternative.
g Makes a statement:
"My job alternative is better for me because it has a larger percentage."

2. a Lists scores for his two job alternatives and ideal job.
b Writes a fraction using first job score as numerator and the ideal job score as the denominator.
c Divides to get a decimal fraction.
d Multiplies answer by 100.

1. a Lists scores for his two job alternatives and ideal job.
b Writes a fraction using first job score as numerator and the ideal job score as the denominator.

0. Anything else.

Module V - Question 4

Goal 10.0 - Evaluation of Job Based on Personal Occupational Values

P.O. 10.4:

Question

1. Figure your favorability score for two job alternatives.

   Make a statement describing what your numbers mean.

Scoring

Points

5. a Lists scores for his two job alternatives and ideal job.
   b Writes a fraction using first job score as numerator and the ideal job score as the denominator.
   c Divides to get a decimal fraction.
   d Multiplies answer by 100.
   e Adds % sign.
   f Repeats steps b-c for second job alternative.
   g Makes a statement:
      "My (job alternative) is better for me because the higher % indicates that it meets a larger percentage of my occupational values than (other job alternative).

4. a Lists scores for his two job alternatives and ideal job.
   b Writes a fraction using first job score as numerator and the ideal job score as the denominator.
   c Divides to get a decimal fraction.
   d Multiplies answer by 100.
   e Adds % sign.
   f Repeats steps b-c for second job alternative.
   g Makes a statement:
      "My (job alternative) is better for me because it is a larger percentage of my ideal score than (other job alternative).

3. a Lists scores for his two job alternatives and ideal job.
   b Writes a fraction using first job score as numerator and the ideal job score as the denominator.
   c Divides to get a decimal fraction.
   d Multiplies answer by 100.

Module VII - Question 1

Goal 12.0 - Evaluation of Self in Relationship to Job Requirements

P.O. 12.1:

Question

1. Make a Self Evaluation Chart.

Rate yourself on each of three skills.

Tell why you rated yourself as you did on each skill.

Scoring

Points

5. a Lists 3 job skills.
   b Lists levels 3, 2, 1.
   c Rates self on each skill.
   d Uses one of these ratings for a 3, 2, or 1 rating explanation.
      3- "I can do the skill better than would be required on the job because (examples)."
      2- "I can do the skill as well as would be required because (examples)."
      1- "I can not do the skill as well as would be required because (examples)."

4. a Lists 3 job skills.
   b Lists levels 3, 2, 1.
   c Rates self on each skill.
   d Uses one of these rating for a 3, 2, or 1 rating explanation.
      3- "I can do the skill better than would be required on the job."
      2- "I can do the skill as well as would be required."
      1- "I can not do the skill as well as would be required."

3. a Lists 3 job skills.
   b Lists levels 3, 2, 1.
   c Rates self on each skill.
   d Uses one of these ratings for a 3, 2, or 1 rating explanation.
      3- "I can do the skill well."
      2- "I can do the skill okay."
      1- "I can not do the skill."

Module VII - Question 1 (Con.)

2. a Lists 3 job skills.
   b Lists levels 3, 2, 1.
   c Rates self on each skill.

1. a Lists 3 job skills.
   b Lists levels 3, 2, 1.

0. Anything else.

Module VII - Question 2

Goal 13.0 - Developing Programs for Acquiring Occupational Skills.

P.O. 13.1:

Question

1. List at least one occupational skill you do not have.

   Write at least a 5-step program that you would use to learn the skill.

Scoring

Points

5. a Lists job skill.
   b Lists first step "Observe someone performing the skill."
   c Lists at least eleven more steps.
   d Lists observable and measurable steps.
   e Lists steps that are in order and lead to learning the skill.

4. a Lists job skill.
   b Lists first step "Observe someone performing the skill."
   c Lists at least six more steps.
   d Lists observable and measurable steps.
   e Lists steps that are in order and lead to learning the skill.

3. a Lists job skill.
   b Lists first step "Observe someone performing the skill."
   c Lists at least four more steps.
   d Lists observable and measurable steps.
   e Lists steps that are in order and lead to learning the skill.

2. a Lists job skill.
   b Lists first step "Observe someone performing the skill."
   c Lists at least two more steps.

1. a Lists job skill.
   b Lists first step "Observe someone performing the skill."

0. Anything else.

Module VII - Question 3

Goal 14.0 - Investigating Principles

P.O. 14.1:

Question

1. Write at least one principle for at least 3 job skills.

Scoring

Points

5. a Lists at least 6 job skills.
   b Writes at least 3 principles for each one in the form of:
   "If I can (job skill), then I can (goal), so that I can (human benefit)."

4. a Lists at least 4 job skills.
   b Writes at least 2 principles for each one in the form of:
   "If I can (job skill), then I can (goal), so that I can (human benefit)."

3. a Lists at least 3 job skills.
   b Writes at least 1 principle for each one in the form of:
   "If I can (job skill), then I can (goal), so that I can (human benefit)."

2. a Lists at least 2 job skills.
   b Writes at least 1 principle for each one in the form of:
   "If I can (job skill), then I can (goal)."

1. Lists at least 1 job skill.

0. Anything else.

Goal 15.0 - Reevaluating Job

P.O. 15.2:

Question

1. Use Career Decision Making Charts to show how new occupational information can affect your job favorability score.

Scoring

Points

5. a Copies old values and old weights from first decision making chart, P.O. 10.2.
   b Lists new favorability signs for each value.
   c Adds weight for each "+" value.
   d Writes the sum as a positive number next to the favorability sign.
   e Adds weight for each "-" value.
   f Writes the sum as a negative number next to the favorability sign.
   g Adds all positive numbers.
   h Adds all negative numbers.
   i Subtracts "-" scores from "+" scores.
   j Records answer as job score.
   k Lists ideal job score from P.O. 10.3.
   l Lists old job score from P.O. 10.2.
   (Computes favorability score for old and new job score.)
   m Writes a fraction using first job score as numerator and the ideal job score as the denominator.
   n Divides to get a decimal fraction.
   o Multiplies answer by 100.
   p Adds % sign.
   q Makes a statement:

   "My first job alternative is (more or less) favorable to me now because the (larger or smaller) the percentage shows that with new occupational information my first job alternative meets a (larger or smaller) percentage of my occupational values than it did before my interview.

Module IX - Question 1 (Con.)

4. a Copies old values and old weights from first decision making chart, P.O. 10.2.
   b Lists new favorability signs for each value.
   c Adds weight for each "+" value.
   d Writes the sum as a positive number next to the favorability sign.
   e Adds weight for each "-" value.
   f Writes the sum as a negative number next to the favorability sign.
   g Adds all positive numbers.
   h Adds all negative numbers.
   i Subtracts "-" scores from "+" scores.
   j Records answer as job score.
   k Lists ideal job score from P.O. 10.3.
   l Lists old job score from P.O. 10.2.
   (Computes favorability score for old and new job score.)
   m Writes a fraction using first job score as numerator and the ideal job score as the denominator.
   n Divides to get a decimal fraction.
   o Multiplies answer by 100.
   p Adds % sign.
   q Makes a statement:
   "My first job alternative is (more or less) favorable to me now because it is a (larger or smaller) percentage of my ideal score.

3. a Copies old values and old weights from first decision making chart, P.O. 10.2.
   b Lists new favorability signs for each value.
   c Adds weight for each "+" value.
   d Writes the sum as a positive number next to the favorability sign.
   e Adds weight for each "-" value.
   f Writes the sum as a negative number next to the favorability sign.
   g Adds all positive numbers.
   h Adds all negative numbers.
   i Subtracts "-" scores from "+" scores.
   j Records answer as job score.
   k Lists ideal job score from P.O. 10.3.
   l Lists old job score from P.O. 10.2.
   (Computes favorability score for old and new job score.)
   m Writes a fraction using first job score as numerator and the ideal job score as the denominator.
   n Divides to get a decimal fraction.
   o Multiplies answer by 100.

p Adds % sign.
q Makes a statement:
"My first job alternative is (more or less) favorable to me now because it
has a (larger or smaller) percentage.

2. a Copies old values and old weights from first decision making chart, P.O. 10.2.
   b Lists new favorability signs for each value.
   c Adds weight for each "+" value.
   d Writes the sum as a positive number next to the favorability sign.
   e Adds weight for each "-" value.
   f Writes the sum as a negative number next to the favorability sign.
   g Adds all positive numbers.
   h Adds all negative numbers.
   i Subtracts "-" scores from "+" scores.
   j Records answer as job score.

1. a Copies old values and old weights from first decision making chart, P.O. 10.2.
   b Lists new favorability signs for each value.
   c Adds weight for each "+" value.
   d Writes the sum as a positive number next to the favorability sign.
   e Adds weight for each "-" value.
   f Writes the sum as a negative number next to the favorability sign.

0. Anything else.

Module IX - Question 1

Goal 16.0 - Reevaluating Occupation With Changed Values

P.O. 16.3:

Question

1. Use Career Decision Making Charts to show and explain how a change in values can affect your job favorability score.

Scoring

Points

5. Compute New Ideal Job Score
a Writes job title.
b Lists original 6 occupational values.
c Lists one new occupational value.
d Lists weights for each value.
e Lists a ++ favorability sign for each value.
f Adds weight for each "++" value.
g Writes sum as a positive number next to favorability sign.
h Adds all positive numbers.
i Records answer as new ideal job score.
j Copies old score for job (from 10.4) next to new ideal job score.
k Computes new score for job.
l Copies values and weights from b and c above on new decision making chart.
m Lists favorability signs for each value.
n Adds weight for each "+" value.
o Writes the sum as a positive number next to the favorability sign.
p Adds weight for each "-" value.
q Writes the sum as a negative number next to the favorability sign.
r Adds all positive numbers.
s Adds all negative numbers.
t Subtracts "-" scores from "+" scores.
u Records answer as job score.
v Records answer as new score for job.
w Writes a fraction using old score for job as numerator and ideal job score as denominator.

3. a Writes job title.
   b Lists original 6 occupational values.
   c Lists one new occupational value.
   d Lists weights for each value.
   e Lists a ++ favorability sign for each value.
   f Adds weight for each "++" value.
   g Writes sum as a positive number next to favorability sign.
   h Adds all positive numbers.
   i Records answer as new ideal job score.
   j Copies old score for job (from 10.4) next to new ideal job score.
   k Computes new score for job.
   l Copies values and weights from b and c above on new decision making chart.
   m Lists favorability signs for each value.
   n Adds weight for each "+" value.
   o Writes the sum as a positive number next to the favorability sign.
   p Adds weight for each "-" value.
   q Writes the sum as a negative number next to the favorability sign.
   r Adds all positive numbers.
   s Adds all negative numbers.
   t Subtracts "-" scores from "+" scores.
   u Records answer as job score.
   v Records answer as new score for job.
   w Writes a fraction using old score for job as numerator and ideal job score as denominator.
   x Divides to get a decimal fraction.
   y Multiplies answer by 100.
   z Adds % sign.
   aa Repeats steps k-u for new score for job.
   bb Makes a statement:
      "My (old/new) favorability score for my job is larger than my (old/new) favorability score.

2. a Writes job title.
   b Lists original 6 occupational values.
   c Lists one new occupational value.
   d Lists weights for each value.
   e Lists a ++ favorability sign for each value.
   f Adds weight for each "++" value.
   g Writes sum as a positive number next to favorability sign.

Module IX - Question 1 (Con.)

h Adds all positive numbers.
i Records answer as new ideal job score.
j Copies old score for job (from 10.4) next to new ideal job score.
k Computes new score for job.
l Copies values and weights from b and c above on new decision making chart.
m Lists favorability signs for each value.

1. a Writes job title.
b Lists original 6 occupational values.
c Lists one new occupational value.
d Lists weights for each value.
e Lists a ++ favorability sign for each value.
f Adds weight for each "++" value.

O. Anything else.

Module IX - Question 2

Goal 17.0 -

P.O. 17.1:

Question

1. List at least two job advancement possibilities for your first job alternative.

Scoring

Points

5. Lists 6 job advancement possibilities.

4. Lists 4 job advancement possibilities.

3. Lists 2 job advancement possibilities.

2. Lists 1 job advancement possibility.

1. Lists 0 job advancement possibilities.

0. Anything else.

CAST SUMMARY QUESTION

Student Name ______________________________

Date ______________________________

Teacher Name ______________________________

School ______________________________

- A career plan is an outline of the things you would do to get ready for a career.
- Think about all the steps you would take to develop your career plan.
- Write each of these steps down in the order you would take them.
- Start from a position of having no career plan.
- Show an example of each step you would take to develop a career plan.

Goals of Curriculum

1.0 Expanding job titles to choose from using the interrogative WHAT and WHO.

2.0 Expanding and classifying jobs under headings of people or things on the basis of what people do.

3.0 Expanding and classifying jobs by interest area for both people and thing jobs.

4.0 Expanding job awareness by classifying jobs in one or more of eight interest areas according to educational levels.

5.0 Choosing a limited set of occupations to explore.

6.0 Developing awareness of job information sources.

7.0 Developing and using questions to obtain information about jobs.

8.0 Clarifying and identifying occupational values physical, intellectual and emotional (What's important to me).

9.0 Ordering of occupational values.

10.0 Evaluating job based on personal occupational values.

11.0 Identifying specific skills through personal interview.

12.0 Evaluating oneself in relation to the job requirements.

13.0 Developing and carrying out programs for acquiring needed occupational skills.

14.0 Investigating principles that relate performance to goals to human benefit.

15.0 Reevaluating job with regard to new information.

16.0 Reevaluating occupation with regard to change of values.

17.0 Investigating job with regard to promotional possibilities.

[illegible]

	•(1-[illegible])	•( ) EXPANDING	•([illegible])	•([illegible]) NARROWING		•([illegible])	•(1[illegible]) PREPARING		•(1[illegible]-1[illegible])
	1 Expanding Jobs	2 Expanding Job Information	3 Identification Requirements	4 Values	5 Weights	6 Favorability	7 Pre Interview	8 Program Skills	9 Re-evaluation
Creative Addition	5 All in order	All in order	All	All	All weighted	All weights times favor-ability	program	observable & measur-able in sequence to goal	compare and show change
200% Quality & Quantity	4 classify jobs into interest area by educational level or more jobs	group sources with question 5 question words	Physical or Intellectual or Emotional groups	Physical or Intellectual or Emotional groups	All prefer-ences separated according to advan-tages and disadvan-tages	Each value related to each job alternative	Day/Night before, Morning of or during 2 out of 3	goal and steps	redo decision
Min. Req.	3 2 or more jobs and int. area or ed. level	sources or questions	2 requirements	2 values	2 expli-cit pre-ferences	2 alterna-tives because	2 steps interview	steps	I like it
50%	2 1 job int. area Ed Level Model	1 question People-Things Model	1 requirement PIE Model	PIE Model	Values $\frac{\text{weight}}{\text{implied preferences}}$ Model	Values $\frac{\text{weight}}{\text{favor.}}$ 1 alt. because Model	Do interview	Concept Goal Model	Takes job Model
0%	1 0 jobs	0 questions	0	0	0	0	0	0	0

General Discriminations

5 - Program - step by step plan in order
4 - Scheme - a model or system for answering question
3 - Answers (Explicit)
2 - Implied Answers (Model or scheme only)
1 - No Answers

*See following page for related curriculum goals

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APPENDIX J

Name ______________________________

Date ______________________________

HUMAN ACHIEVEMENT SKILLS - PRE-TEST

Item 1.

Step 1. Read the following stimulus expression from a 12-year old girl. "I try to do my homework, but that teacher gives us such stupid stuff, nobody can do it."

Step 2. Write a response directly to this student, just as you would respond in real life.
Formulate your response to help the student explore where he is in terms of his sutuation.

____

____

____

____

Step 3. Read the following stimulus expression from a 15-year old boy. "I've always wanted to be an engineer, but now I'm finding I can't even do my algebra."

Step 4. Rate each of the following alternative responses in terms of how effective it is in helping the student explore where he is in terms of his situation.
Use this scale to rate each response separately. You may use half point intervals if necessary (1.5, 2.5, 3.5, etc.).

5.0 Extremely Effective
4.0 Very Effective
3.0 Effective
2.0 Very Ineffective
1.0 Extremely Ineffective

Step 5. Alternative Responses	Your Rating
1. You feel discouraged	1. ________
2. You better buckle down in there or you'll never make it.	2. ________
3. You feel discouraged because you know algebra is important and you're not doing well.	3. ________
4. You should explore all the ways you can get help in algebra so you can do better.	4. ________
5. You feel sad because things are going badly for you in algebra.	5. ________

Item 2.

Step 1. Read the following stimulus expression from a 14-year old girl. "I never know if what I do is good or bad. You never tell me."

Step 2. Write a response directly to the student just as you would respond to him in real life.
Formulate your response to help the student understand where he is and where he wants to be in regard to this situation.

____

____

____

____

Step 3. Read the following stimulus expression from a 12-year old boy. "They're always picking on me, banging up on me and pushing me around. I don't even want to go to school anymore."

Step 4. Rate each of the following alternative responses in terms of how effective it is in helping the student understand where he is and where he wants to be in regard to his present situation. Use this scale to rate each response separately. You may use half point intervals, if necessary (1.5, 2.5, 3.5, etc.).

5.0 Extremely Effective
4.0 Very Effective
3.0 Effective
2.0 Very Ineffective
1.0 Extremely Ineffective

Step 5.

Alternative Responses	Your Rating
1. You feel scared because you can't handle them and you know you need to learn to handle them.	1. ________
2. You feel scared because you don't know how to stop them.	2. ________
3. You feel shook-up because they might hurt you.	3. ________

Alternative Responses (cont.) Your Rating

4. You feel frightened because you can't deal with them effectively. 4. ______

5. You feel afraid because they are always coming after you. 5. ______

Item 3.

Step 1. Read the following stimulus expression from an 18-year old boy. "I'm interested in working with computers and I know there are jobs available both with and without college. But, I don't know which would be best for me. I'll be graduating soon and have to decide."

Step 2. Write a response directly to this student just as you would respond in real life.

Formulate your response to help the student understand the steps he must take to get from where he is to where he wants to be.

____

____

____

____

Step 3. Read the following stimulus expression from a 13-year old boy. "If I don't make it this last marking period, my Dad's sure going to get me. Can you help me?"

Step 4. Rate each of the following alternative responses in terms of how effective it is in helping the student to understand what steps he should take to get from where he is to where he wants to be. Use this scale to rate each response separately. You may use half point intervals, if necessary (1.5, 2.5, 3.5, etc.).

5.0 Extremely Effective
4.0 Very Effective
3.0 Effective
2.0 Very Ineffective
1.0 Extremely Ineffective

Step 5. Alternative Responses Your Rating

1. You feel frightened because you can't see your way clear and yet you know it has to be different this term. 1. ________

2. You're scared because you think maybe you don't know how to do any better and now you have to learn to. For me to help you, we first have to explore fully the situation where you are messing up so we can come to understand just what it is you need to help you make it. Then we can develop a plan for giving you the skills to meet your needs. 2. ________

3. I don't think your dad will really do anything. 3. ________

4. If I were in your shoes, I'd really buckle down and put myself on a schedule where you're studying one hour for every hour you spend in class. 4. ________

5. You're pretty worried because your dad is really putting the pressure on you. 5. ________

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APPENDIX K

Educational Resource Development
Skills Inventory

Name:____________________ School:____________________

Subject:____________________ Grade Level:____________________

Home Address:____________________

____

____

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Human Resource Development Press

Robert R. Carkhuff, Ph. D.
President

Ted W. Friel, Ph. D.
Director of Career and Manpower Development

David H. Berenson, Ph. D.
Director of Educational Development

Teaching Delivery Skills

Educators have demonstrated that one critical dimension affecting student achievement is the student's individual learning style. This is to say that all students do not learn efficiently in precisely the same way. Rather, research indicates that individual students adopt preferred learning strategies. The quickest learners seem to have mastered several preferred learning strategies that enable them to adopt to different teaching styles.

Research into the development of Human Resources indicates that a similar phenomena can account for a predictable portion of teacher effectiveness. Specifically, effective teachers have developed a large quantity of teaching strategies, curriculum development skills and classroom management skills to deliver their programs. This repertoire of teaching delivery skills enables them to individualize their delivery of the curriculum to fit student learning styles, thereby increasing their probability of meeting individual student performance objectives.

This item is designed to give you an opportunity to demonstrate your teaching delivery skills.

On the following pages, you are to develop a lesson plan for a lesson you could teach tomorrow. You are to show the methods you would use to deliver that lesson as well as the classroom management procedures you would use to insure the delivery of that lesson.

Lesson Plan

I. Lesson Topic: ______________________

II. Objective of Lesson: ______________________

III. Procedure and Methods:

IV. Classroom Management for Lesson:

V. How you plan to evaluate lesson:

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CAST - Materials Developed

The following materials listed under Roman numeral I were developed under the CAST project and are available from the sources listed under Roman numeral II.

I. CAST Materials (These are bound separately but should be used as one because of the cross reference of the appendices)

  A. Phase III Lesson Plan Manual
    Lesson Plan Manual I Junior High
    Lesson Plan Manual II Lower Elementary
    Lesson Plan Manual III Upper Elementary

  B. Staff Inservice Training Program Manual

  C. CAST Technical Report

  D. Phase III Final Report*

II. Sources of Materials

After you have sent in your request for these materials an abstract will be sent out first with a number for actual ordering of the materials.

ABSTRACT INSTRUCTIONAL MATERIALS | ABSTRACT RESEARCH MATERIALS

Center for Vocational Education*
Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

National Network for Curriculum Co-Ordinator
Vocational and Technical Education

7 Locations:

1. Vocational Curriculum and Media Center
Division of Vocational Education
225 W. State Street
P. O. Box 2019
Trenton, New Jersey 08625

2. Instructional Materials Laboratory
University of Kentucky
Research Foundation
Lexington, Kentucky 40506

3. RCU and Curriculum Co-ordinating Unit
Mississippi State University
State College, Mississippi 39762

4. Curriculum Management Center
Division of Vocational and Technical Education
1035 Outer Park Drive
Springfield, Illinois 62706

5. The Curriculum and Instructional Material Center
State Department of Vocational & Technical Association
1515 W. 6th Avenue
Stillwater, Oklahoma 74074

6. Curriculum Management Center
California State Department of Education
1025 P Street
Sacremento, California 95814

7. Vocational Curriculum Center
Department of Vocational and Technical Education
216 Old Capitol Building
Olympia, Washington 98501

Description of AIDS
(Assessment of Instructional Delivery System)

Reviewing Monitoring Systems -

After an investigation of the Student Achievement Monitoring (SAM), which is a management system under development by Oakland Intermediate School District, it became evident that the time schedule for implementation was clearly outside the Career Achievement Skills Training project duration. Therefore, in order to monitor the acquisition of the Career Achievement Skills, a system referred to as AIDS (a computer process developed by the Pontiac Schools' Research and Development Department for determining where a student stands in regard to accepted educational goals or objectives.) was modified from its use with basic skills to Career Achievement Skills. AIDS provided information to the students, teachers and Project Director as to how effectively the Career Achievement Skill objectives had been delivered to students.

Implementing AIDS -

Several steps were included in this monitoring process. First, each experimental and control group in the Career Achievement Skills Training program was pre and post-tested. Secondly, the tests were scored and the data keypunched. Thirdly, the computer program grouped items together which were measuring part of the same objective or skill. Finally, the data was analyzed and a computer printout produced which described the student population in terms of:

a. Pre-post scores on each of the Career Achievement Skills objectives,

b. total scores for each student on the pre-pose tests, and

c. indication of mastery level for each Career Achievement Skills objective by placing students in the following groups:

    1. did not know it on pre and did not learn it,
    2. did not know it on pre and learned it,
    3. knew it on pre and forgot it, and
    4. knew it on pre and maintained it.

The computer then determined the total number of students that grew, stayed the same and those that lost.

A student Career Achievement Skills profile was then printed and returned to the student. This consisted of a listing of each career achievement skill objective, the pre-test score, post-test score and a growth statistic - the difference in pre and post score. It also printed the "group or class" averages for each Career Achievement Skills objective as well. This told the student his or her level of performance relative to his or her peers. An analysis by skill, i.e. group of objectives, was then performed and compared to the pre-test skill attainment level.

Student Outcomes and Recommendations

The goal, in terms of time, was to have the Career Achievement Skills results back to the student in a matter of a few days after post testing. Unfortunately, the test used was so constructed that it required extensive checking by trained personnel. This extended the time needed to return the computer outputs to weeks instead of days.

Feedback from the teachers indicated that the students were excited about the form in which the data was reported to them. For most students this was the first time they had received individual results in the form of student profiles.

It became evident that certain things are extremely important regarding this type of testing and reporting. The first is that if a student is absent on pre and post test, his available data should be analyzed anyway, so that he/she has a record of the career achievement skills mastered. Secondly, the instrument (test) must be of the nature that will allow for simple interpretation to the student. Lastly, as with all testing, the data must be returned in as short a time as possible.

Teacher Outcomes and Recommendations

This system also served the teachers and counselors by describing and quantifying how effective they were in the delivery of the Career Achievement Skills objectives. Teachers and counselors could use the computer information to help students and themselves. They recommended using the information contained in the output to assess where students are in relation to the Career Achievement Skills and to group students who need help on the same skills. Also, they suggested using the information to assess what parts of their lesson plans or delivery need improvement.

Program Outcomes and Recommendations

For the program evaluation, the statistical data on each objective provided a basis to further evaluate and summarize the effects of the CAST program. It was recommended to continue periodic progress evaluation based on statistical analyses. From reported information modifications in the total program should be made.

For more information on AIDS contact Mr. Al Pavlish, Pontiac Research and Evaluation Department, Pontiac Public Schools, Pontiac, Michigan.

Description of CAOS Student Printout

Line 1 - Students name

2 - Job code indicating combination of highest preference - For example, this students code 2 4 3 indicates that his job preference category include those jobs highest in investigative characteristics, next highest in social characteristics, and least highest in artistic characteristics. -Int - 2 and Ed Lvl 3 indicates the student marked the 2nd interest (outdoor) area circle and the 3rd education (high school plus some training) level circle on his CAOS answer sheet.

3 - In this section all the jobs falling under the job code 243 are printed out. The first number given is a computer number. The three letters I S A are the job code abbreviation. The next number is the DOT (Dictionary of Occupational Titles 1965). The next number indicates the level of education as indicated in the DOT classification.

4 and 5 - The same job code is used only in a different combination thus producing a new job list.

6 - Now the jobs are printed out according to interest area (outdoors) and education level (high school plus training).

```
COMPUTER ASSISTED OCCUPATION SEARCH

325CC   JONES     WILL
FIRST CHOICE   2 INVE  SECOND CHOICE   4 SOCI THIRD CHOICE   3 ARTI INT- 2 ED LVL-  3

JOB CODE  243 HAS     4JOB TITLES
169   ISA     70.108   6   PHYSICIAN*
169   ISA     70.108   6   PSYCHIATRIST
170   ISA     45.088   6   PSYCHOLOGIST
171   ISA     78.381   5   MEDICAL TECHNOLOGIST

NEW JOB CODE  234

JOB CODE  234 HAS     2JOB TITLES
152   IAS     50.088   6   ECONOMIST
153   IAS     70.108   6   INTERNIST  PHYSICIAN
```

5

```
NEW JOB CODE  423

JOB CODE  423 HAS     8JOB TITLES
302   SIA     90.228   6   COLLEGE PROFESSOR
303   SIA     51.088   6   POLITICAL SCIENTIST
304   SIA      0.000   6   SOCIAL SCIENTIST*
305   SIA     54.088   6   SOCIOLOGIST
306   SIA     75.378   5   PROFESSIONAL NURSE
307   SIA    195.108   5   SOCIAL WORKER
308   SIA    195.108   5   GROUP WORKER
309   SIA     45.108   5   REHABILITATION COUNSELOR

*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-
```

6

```
INTEREST AREA- 2  OUTD EDUCATION LEVEL- 3  TECH
499   RCS   859.281   3   BLASTER
500   RCS   850.781   3   MINER
501   RCE   929.883   3   TRACTOR OPERATOR
510   RCS   911.887   3   SAILOR  SEAMAN
515   RCS   861.381   3   BRICKLAYER
516   RIE   866.381   3   ROOFER
```

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CAOS SYSTEM DOCUMENTATION

APPENDIX C

Language - FORTRAN IV

Memory - 16K 1 Byte words

Peripherals - Card Read
- Line Printer
- Random Access Disc Storage (200,000 Character)
- Timing -- Limited by Printer (I/O bound)
- Availability -- Limited by Copywrites

Software - 3 -- Programs

Since the local school districts computer is primarily a remote job entry device, the memory capacity is limited. Therefore, it was necessary to write 3 seperate programs and call them when needed.

1) Create Disc file of occupations
2) a. Read Student Cards
   b. Convert Data and Determine Preference
   c. Create Disc file of Student Results
3) a. Read Student Data from Disc
   b. Print occupation list -- Holland
   c. Print occupation list -- Roe

Future Development - Produce class summaries
- Measure Convergence between Holland and Rowe
- Localize occupation list
- Integrate Internship with occupation list
- Dtudent characteristics/consistency, etc.

PROGRAM 1

Name - BLDOCF - Build occupation file

Input - Card - Occupation description

Output - Random access file of occupation
Printer file of Occupation

Input Format - Card

Column	No. Char.	Description	Data Type
1-3	3	Alpha occupation code	Alpha
4-10	7	DOT (Including decimal)	Numeric
11-50	40	Occupation title	Alpha
51-76	26	Blank	
77-79	3	Sequence title no.	Numeric
80	1	Update field	Numeric

Output Format - Random Access Disc-F-20

Location	No. Char.	Description	Data Type
1-3	3	Sequence number	Numeric
4-83	80	Card image	Alpha

This program creates a random access disc file which is accessed during the final place in printing the student profile. The order of these cards is determined by the sequence of jobs listed by Holland and Rowe.

The job codes are converted to equivalent numerical values. These values along with the number of jobs in category are stored in a matrix which in turn are used to create relative disc addresses. Therefore it is important that the number of codes, and number of jobs within each code be carefully determined and properly set in the data statement in the student profile program.

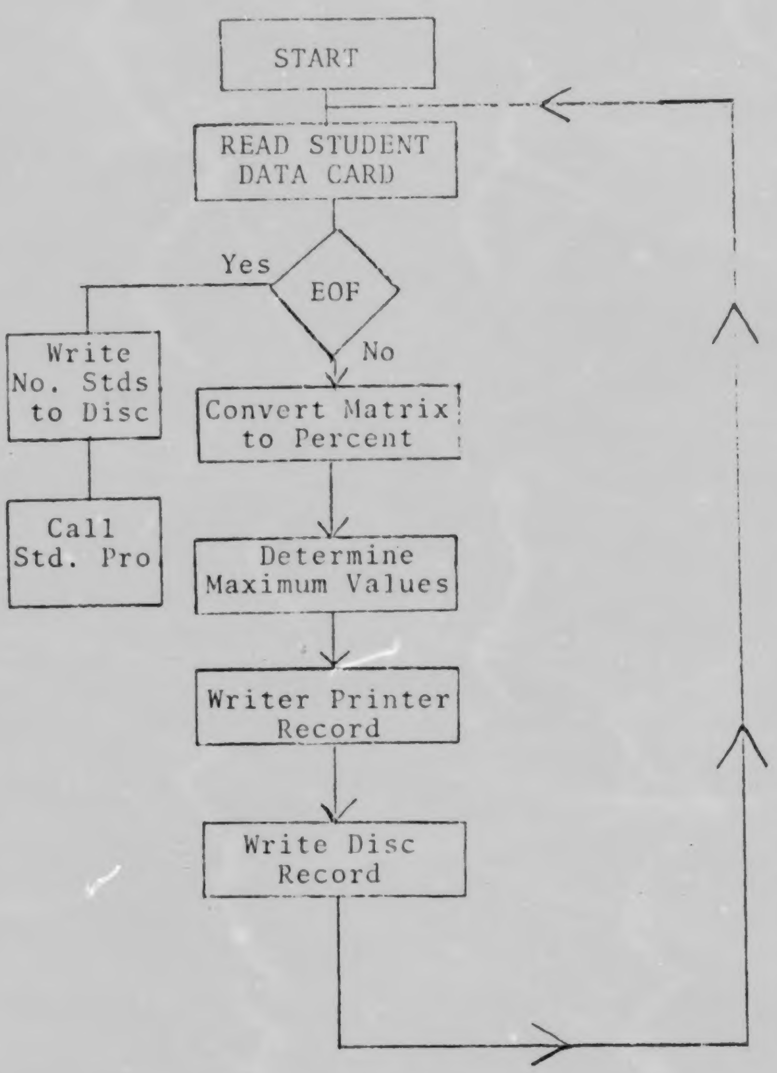
PROGRAM II

Name - BLDSMX - Build Student Matrix

Input - Card - Student Date (see student input for format)

Output - Disc - Random Access-Converted and Raw Matrix.
(See Program III for format of Disc file)

Output - Printer - Converted and Raw Matrix


START
READ STUDENT DATA CARD
EOF
Yes
No
Write No. Stds to Disc
Call Std. Pro
Convert Matrix to Percent
Determine Maximum Values
Writer Printer Record
Write Disc Record

Input Format - Student Data Cards

Computer Assisted Occupation Search

Column	No. Char.	Description	Data Type
1- 5	5	Student ID	Numeric
6-13	8	Last Name	Alpha
14-17	4	First Name	Alpha
18-19	2	Activities-Realistic	Numeric
20-21	2	Activities-Investigative	Numeric
22-23	2	Activities-Artistic	"
24-25	2	Activities-Social	"
26-27	2	Activities-Enterprising	"
28-29	2	Activities-Conventional	"
30-31	2	Competencies-Realistic	"
32-33	2	Competencies-Investigative	"
34-35	2	Competencies-Artistic	"
36-37	2	Competencies-Social	"
38-39	2	Competencies-Enterprising	"
40-41	2	Competencies-Conventional	"
42-43	2	Occupations-Realistic	"
44-45	2	Occupations-Investigative	"
46-47	2	Occupations-Artistic	"
48-49	2	Occupations-Social	"
50-51	2	Occupations-Enterprising	"
52-53	2	Occupations-Conventional	"
54	1	Self-Estimates-Mechanical	"
55	1	Self-Estimates-Scientific	"
56	1	Self-Estimates-Artistic	"
57	1	Self-Estimates-Teaching	"
58	1	Self-Estimates-Sales	"
59	1	Self-Estimates-Clerical	"
60	1	Self-Estimates-Manual	"
61	1	Self-Estimates-Math	"
62	1	Self-Estimates-Musical	"
63	1	Self-Estimates-Friendliness	"
64	1	Self-Estimates-Managerial	"
65	1	Self-Estimates-Office	"

Optional

66	1	Interest Area Rows	Numeric
67	1	Educational Level	Numeric

PROGRAM II

The primary function of this program is to analyze the student responses and to determine or calculate the three highest interest areas. This is done by producing a matrix with the interest areas as the columns and the categories - activities, competencies, occupations, self estimate I and self estimate II as the rows. Since the range of values within the cells is a variable, this raw matrix of response is converted to percents in what is called the converted matrix. Totals for both matrices are calculated and printed as marginals. The computer then selects the three highest values and lists them under the matrix.

The row totals, column totals, name, student number, interest area and education level (these last two are optional used in the ROWE classification) are then written to disc as well as the last line of the printer output. This data is then read by the last program and the student profiles printed.

PROGRAM III

Name- BLDSPR- Building Student Profile

Input- Disk - Student Data

Output- Disk Occupation
- Printer Listing

Input Format- -See Student Input card
-Occupation Category Description

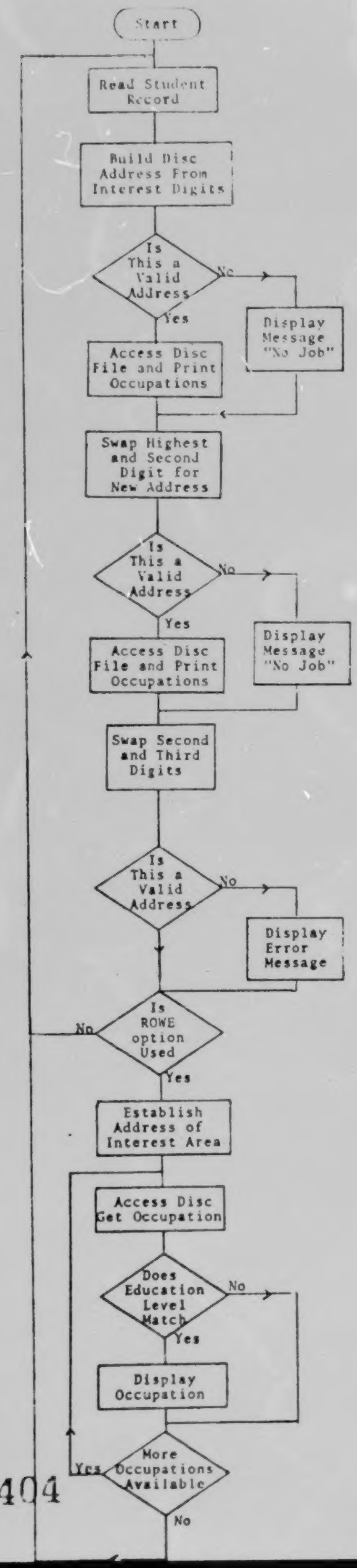
Ouput Format-

Location	No. Char.	Description	Data Type
1-5	5	Student ID	Numeric
6-13	8	Last Name	Alpha
14-17	4	First Name	Alpha
18-19	2 (1)	First Choice	Numeric
20-21	2 (1)	Second Choice	Numeric
22-23	2 (1)	Third Choice	Numeric
24-223	4	Matrix Output	Numeric

Location	No. Char.	Description	Data Type
1-3	3	Job Code Title	Alpha
4-6	3	Blank	
7-9	3	Job Code Title	Numeric
		equivalent	Numeric
10-11	2	Blank	
12-13	2	No. Occupation in Category	Numeric

PROGRAM III

Student Printer Profile


Start
Read Student Record
Build Disc Address From Interest Digits
Is This a Valid Address
No
Yes
Display Message "No Job"
Access Disc File and Print Occupations
Swap Highest and Second Digit for New Address
Is This a Valid Address
No
Yes
Display Message "No Job"
Access Disc File and Print Occupations
Swap Second and Third Digits
Is This a Valid Address
No
Display Error Message
Is ROWE option Used
No
Yes
Establish Address of Interest Area
Access Disc Get Occupation
Does Education Level Match
No
Yes
Display Occupation
More Occupations Available
Yes
No

PROGRAM III

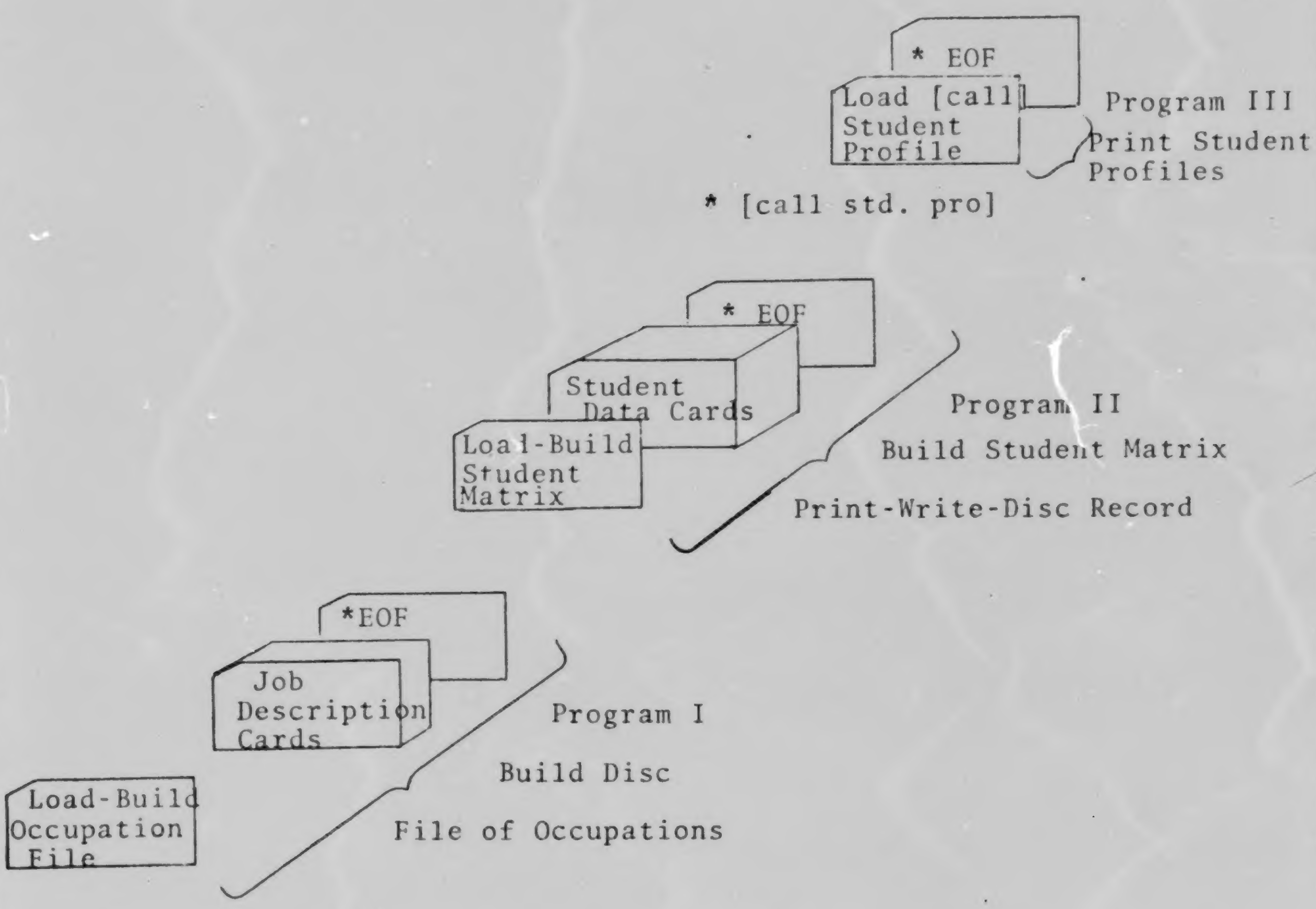
The disc record established in Program II is the input for this program. Once this data is read, it builds a search key. This key is a three digit number corresponding to the three highest interest areas established in Program II. The highest interest area is the hundreds position, the second highest is the tens position and the third highest is the units position.

This program contains a data statement which lists the valid interest area combination(Job) and the corresponding number of occupations within the combination (NJOB). The program then builds an address for the first job in each area. Once the interest areas are combined to create a 3 digit number, a search is begun to determine if this number is valid,i.e. is there a job list for this combination. If a match is found, the corresponding disc address is then placed in the key and the disc record is then obtained. Since the number of jobs is known for each valid job classification, sequenced records are read and listed under that classification. After all the jobs under that classification are listed and/or if it turns out that that number is not valid, the order of the interest areas are changed, i.e. the highest level is changed with the second level and the search begins again.

A third exchange occurs by swapping the third digit with the second.

If the user elected to respond on the ROWE classification, interest and education level, the records are again scanned and the matched occupations are listed.

DECK SETUP FOR PROCESSING


* EOF
Load [call] Student Profile
Program III
Print Student Profiles
* [call std. pro]
* EOF
Student Data Cards
Loa l-Build Student Matrix
Program II
Build Student Matrix
Print-Write-Disc Record
*EOF
Job Description Cards
Load-Build Occupation File
Program I
Build Disc
File of Occupations

* The current version of Program II has a call statement (INVOKE) which automatically causes execution of Program III. Therefore Programs II and III are a single job.

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```
  FOR    N IV VER10/MDUCC                                                          10/22/74 PAGE 001
// DAD44 UNITNO-20
// PRINT DEVICE-1403
// READ DEVICE-1442
*PROCESS  SOURCE,LINK 1,LIF R1  ,MAP
    1               PROGRAM MLDUCC
    2               DIMENSION I 10 ,C 10 ,R 20
    3               DEFINE FILE 20 999,050,E,IADD
    4        100    FORMAT  13,20A4
    5        101    FORMAT  F 6,13,20A4
    6        102    FORMAT 20A4
    7               DO 10 IX 1,999
    8               IADD IX
    9               READ 9,102,END 22  R I ,I 1,20
   10               WRITE  3,101  IX, R I ,I 1,20
   11               WRITE  20¤IX,100  IX, R I ,I 1,10
   12        10     CONTINUE
   13        22     CONTINUE
   14               STOP
   15               END
 NAME    AT HEX1 DEC1  HEX2 DEC2  NAME    AT HEX1 DEC1  HEX2 DEC2  NAME    AT HEX1 DEC1  HEX2 DEC2
 R       R U0403 01027 042A 01066 C       R U042B 01067 0452 01106 R       R  0453 01107 04A2 01186
 IADD    I  0443 01187            IX      I  04A7 01191            I       I  04AB 01195

                        ERRORS FOR THIS COMPILATION

    STATEMENT                        ERROR
     NUMBER               ISN        NUMBER    SEVERITY    EXPLANATION

                                                  4        UNDEF VAR NAME, INDICATED BY A ¤U¤ IN MAP

    001 TOTAL ERRORS FOR THIS COMPILATION
    4 WAS THE HIGHEST SEVERITY

   ** STATEMENT ALLOCATIONS
  102    05A6  101   05AF  100    05BD  10    0679  22    067C
```

```
FORTRAN IV VER10/MODCO                                                     10/22/74 PAGE 001

// PRINT DEVICE-1403
// READ DEVICE-1442
// CAD44 UNITNO-21
// CAD44 UNITNO-20
*PROCESS  SOURCE,LINK 1,LIB R1   ,MAP
   1            PROGRAM STCPRO
   2            DIMENSION JOB 80 ,NJOB 80 ,JOBAD 80
   3            DIMENSION MX2 7,7 ,ROW 6 ,COL 7 ,R 20  ,A 20 ,ROWE 8 ,EDLVL 5
   4            DATA ROW/□ACTI□,□COMP□,□OCCU□,□SLF1□,□SLF2□,□TOTA□/
   5            DATACOL/□REAL□,□INVE□,□ARTI□,□SOCI□,□ENTE□,□CONVE□,□TOTA□/
   6            DATA ROWE/□RECR□,□OUTD□,□SERV□,□EDUC□,□BUSC□,□TECH□,□SCIF□,□BUSD□/
   7             DATA EDLVL/□DROP□,□H.S.□,□TECH□,□COLL□,□GRAD□/
   8            DATA NJOB/02,20,35,23,02,19,04,04,02,04,07,7,17,5,2,5,3,6,4,4,1,
               X4,5,12,13,
               X        10,6,6,5,13,1,5,12,3,6,3,11,1,8,1,4,5,7,3,6,4,8,2,9,3,1,1,
               X1,1,1,26,2,13,6,5,2,2,9,4,3,6,2,2,4,2,2,4,40,22,77,34,62,148,58,
               X63/
   9            DATA JOB/123,124,125,126,132,145,146,142,156,152,154,162,164,165,
               X234,231,246,241,243,254,256,261,213,214,215,216,345,342,354,324,
               X325,321,456,451,452,453,465,412,415,416,423,425,426,421,435,436,
               X432,562,564,512,514,516,524,534,531,546,541,542,543,612,614,615,
               X624,625,621,645,641,642,643,651,652,654,000,680,740,700,730,720,
               X670,710/
  10            DEFINE FILE 21 100,225,L,IADD
  11            DEFINE FILE 20 999,050,L,IS
  12      110   FORMAT I3,A3,F7.3,I1,17A4,A1
  13      111   FORMAT  I5,2A4,A4,3I2,50I4,2I1
  14      112   FORMAT □0□,I5,2X,2A4,1X,A4,3I2/21I4/21I4/21I4
  15      113   FORMAT □ FIRST CHOICE□,I3,1XA4,□ SECOND CHOICE □,I3,1X,A4,
               X□ THIRD CHOICE □,I3,1X,A4,□ INT-□,I2,□ ED LVL-□,I3
  16      114   FORMAT □0JOB CODE □,I4,□ HAS □,I4,□JOB TITLES□
  17      115   FORMAT □0JOB CODE □,I4,□ HAS NO JOB TITLES□
  18      116   FORMAT □0NEW JOB CODE □,I4
  19      117   FORMAT □ □,I3,2X,A3,2X,F7.3,2X,I1,2X,18A4
  20      118   FORMAT □ NO JOB TITLES EXIST FOR TRAITS SELECTED□
  21      146   FORMAT 6X,I3,1X,I3
  22      147    FORMAT □ □9I5
  23      150   FORMAT □1 COMPUTER ASSISTED OCCUPATION SEARCH□
  24      151   FORMAT I3,20A4
  25      152   FORMAT □0INTEREST AREA-□,I2,2X,A4,□ EDUCATION LEVEL-□,I2,2X,A4
  26      153   FORMAT □0NO JOB TITLES FOR THE SPECIFIED INTEREST AND EDUCATION
               X LEVEL INDICATED□
  27      154   FORMAT □0□, 50 □*-□
  28            IS   1
  29            READ 21□ IS,151   NST, A J ,J 1,20
         C      CALCULATE JOB ADDRESS
  30            JOBAD 1  1
  31            DO 72 I 2,80
  32            J   I- 1
  33            J1   JOBAD J
  34            J2   NJOB J
  35            JOBAD I    J1 + J2
  36            WRITE 3,146  JOBAD I ,NJOB I
  37       72   CONTINUE
  38            NST   NST + 1
  39            DO 10 IS   2,NST
  40            WRITE 3,150
```

```
41             READ  21=IS,111 ID,L1,L2,F1,IFST,ISEC,ITRD,
             X  MX2 J,K ,K 1,7 ,J 1,6 ,INT,IEDL
42             JPRT   0
43             WRITE 3,112  ID,L1,L2,F1
        C    X                ID,L1,L2,F1,IFST,ISEC,ITRD,  MX2 J,K ,K 1,7 ,J 1,6
44             WRITE  3,113 IFST,COL IFST ,ISEC,COL ISEC ,ITRD,COL ITRD ,INT,IEDL
45             ICODE IFST*100+ISEC*10+ITRD
46             IPAS 0
47       15    DO 12 IP 1,72
48             IF  ICODE.EQ.JOB IP   GO TO 13
49             GO TO 12
50       13    WRITE  3,114 ICODE,NJOB IP
51             GO TO 14
52       12    CONTINUE
53             IPAS IPAS+1
54             WRITE  3,115 ICODE
55       32    GO TO  16,17,18,19,20,31 ,IPAS
        C      COMPUTE NEW CODE
56       16    ICODE IFST*100+ITRD*10+ISEC
57       21    WRITE  3,116 ICODE
58             GO TO 15
59       17    ICODE ISEC*100+IFST*10+ITRD
60             GO TO 21
61       18    ICODE ISEC*100+ITRD*10+IFST
62             GO TO 21
63       19    ICODE ITRD*100+IFST*10+ISEC
64             GO TO 21
65       20    ICODE ITRD*100+ISEC*10+IFST
66             GO TO 21
67       31    WRITE 3,118 .
68             GO TO 42
69       14    CONTINUE
70             IDX  NJOB IP
71             DO 30 I 1,IDX
72             IADD JOBAD IP +I-1
73             READ 20=IADD,110  IX,RIA,DOT,JED, R J ,J 1, 8
74             WRITE 3,117  IX,RIA,DOT,JED, R J ,J 1, 8
75       30    CONTINUE
76             IPAS IPAS+1
77             IF IPAS.EQ.4  GO TO 42
78             GO TO 32
79       42    IF INT.EQ.0   GO TO 10
80             WRITE 3,154
81             WRITE 3,152  INT,RCWE INT ,IEDL,EDLVL IEDL
82             INT2   INT + 72
83             KEY  JOBAD INT2
84             IDX  NJOB INT2
85             DO  40 I 1,IDX
86             IADD  KEY+I-1
87             READ 20=IADD,110  IX,RIA,DOT,JED, R J ,J 1, 8
88             IF JED.EQ.6 JED JED-1
89             IF JED.EQ.IEDL GO TO 41
90             GO TO 40
91       41    WRITE 3,117  IX,RIA,DOT,JED, R J ,J 1, 8
92             JPRT   1
93       40    CONTINUE
94             IF JPRT .EQ. 1  GO TO 10
```

```
FORTRAN IV VER10/MODCS                                                       10/22/74 PAGE 003

  95              WRITE 3,153
  96        10    CONTINUE
  97              STOP
  98              END

NAME    AT HEX1 DEC1  HEX2 DEC2  NAME    AT HEX1 DEC1  HEX2 DEC2  NAME    AT HEX1 DEC1  HEX2 DEC2
ROW     R  0675 01653 066C 01676 CEL     R  068D 01677 06A8 01704 ROWE    R  06A9 01705 06C8 01736
EDLVL   R  06C9 01737 06DC 01756 NJOB    I  06DD 01757 081C 02076 JOB     I  081D 02077 095C 02396
JOBAD   I  095D 02397 0A9C 02716 MX2     I  0A9D 02717 0B60 02912 R       R  0B61 02913 0BB0 02992
A       R  0BB1 02993 0C00 03072 IADD    I  0C01 03073            IS      I  0C05 03077
NST     I  0C09 03081            J       I  0C0D 03085            I       I  0C11 03089
J1      I  0C15 03093            J2      I  0C19 03097            ID      I  0C1D 03101
L1      I  0C21 03105            L2      I  0C25 03109            F1      R  0C29 03113
IFST    I  0C2D 03117            ISEC    I  0C31 03121            ITRD    I  0C35 03125
K       I  0C39 03129            INT     I  0C3D 03133            IEDL    I  0C41 03137
JPRT    I  0C45 03141            ICODE   I  0C49 03145            IPAS    I  0C4D 03149
IP      I  0C51 03153            IDX     I  0C55 03157            IX      I  0C59 03161
RIA     R  0C5D 03165            CCT     R  0C61 03169            JFD     I  0C65 03173
INT2    I  0C69 03177            KEY     I  0C6D 03181

                                 ERRORS FOR THIS COMPILATION

 STATEMENT                                ERROR
  NUMBER                          ISN    NUMBER     SEVERITY     EXPLANATION

    147                                    97          4         STATEMENT NUMBER IS UNREFERENCED
                                  C15      55          4         MISSING FORMAT DELIMITER
                                  C22      55          4         MISSING FORMAT DELIMITER

   C03 TOTAL ERRORS FOR THIS COMPILATION
   4 WAS THE HIGHEST SEVERITY

     STATEMENT ALLOCATIONS
154    0EDF  153   0F38  152   0F60  151   0F78  150   0FA7  147   0FB0  146   0FBC  118   0FF0
117    0FF9  116   1024  115   104A  114   1071  113   10BC  112   10EB  111   1112  110   112A
72     11F6  15    12F7  13    1320  12    1338  32    1350  16    1353  21    1368  17    137A
18     1395  19    13BC  20    13CB  31    13E6  14    13F2  30    1495  42    1480  41    158A
40     15C5  10    15CD
```

```
// PRINT DEVICE-1403
// READ DEVICE-1442
// DAD44 UNITNO-21
*PROCESS  SOURCE,LINK 1,LIB 21   ,MAP
   1              PROGRAM BLDMX
   2              DIMENSION W 6
   3              DIMENSION MX 7,7 ,A 20 ,MX2 7,7 ,NI 5 ,CCL 7 ,ROW 6
   4              DATACOL/□REAL□,□INVE□,□ARTI□,□SPCI□,□ENTE□,□CONVE,□TOTA□/
   5              DATA ROW/□ACTI□,□CCMP□,□OCCU□,□SLF1□,□SLF2□,□TOTA□/
   6              DEFINE FILE 21 100,225,E,IS
   7       100    FORMAT  20A4
   8       101    FORMAT      15,A4,A4,A4,1512,1411
   9       102    FORMAT  □ □,615
  10       103    FORMAT  □GRAW MATRIX□
  11       104    FORMAT  6X,7 A4,4X
  12       105    FORMAT  □ □,A4,7 15,3X
  13       106    FORMAT  □CONVERTED MATRIX□
  14       107    FORMAT  □ THE HIGHEST VALUE IS □,1A4,□ VALUE □,15
  15       108    FORMAT  □ THE SECOND VALUE IS □,1A4,□ VALUE □,15
  16       109    FORMAT  □ THE THIRD VALUE IS □,1A4,□ VALUE □,15
  17       110    FORMAT □ □,15,2A4,A4,312/2114/2114/2114
 ·18       111    FORMAT  15,2A4,A4,312,5014,211
  19       112    FORMAT □1□,20A4
  20       113    FORMAT □ □,15,1X,2A4,1X,A4,313,2X,4X,1316/ □ INT-□,13,□ ED-□,14
  21       114    FORMAT □ □,□ID□,5X,□LAST□,3X,□FIRST□,2X,□HI MD LO□,5X,
                X 6 1X,A4,1X ,7 1X,A4,1X ,  213
  22       115    FORMAT 13,20A4
         C        READ HEADER
  23              READ 9,100 ,A I ,I 1,20
  24              NI 1  11
  25              NI 2  11
  26              NI 3  14
  27              NI 4  5
  28              NI 5  5
  29              DO 10 IS 2,999
  30              WRITE 3,112   A I ,I 1,20
  31              READ 9,101,END 11  ID,L1,L2,F1,  MX J,K ,K 1,6 ,J 1,5 ,INT,IEDL
         C        COMPUTE PERCENTAGES AND TOTAL BY ROW
  32              DO 12 J 1,5
  33              MT 0
  34              MT2 0
  35              DO 13 K 1,6
  36              MX2 J,K   MX J,K *100 /NI J
  37              MT MX J,K +MT
  38              MT2 MX2 J,K +MT2
  39        13    CONTINUE
  40              MX J,7  MT
  41              MX2 J,7  MT2
  42        12    CONTINUE
         C        TOTAL BY COLUMN
  43              DO 14 K 1,7
  44              MT 0
  45              MT2 0
  46              DO 15 J 1,5
  47              MT MX J,K +MT
  48              MT2 MX2 J,K +MT2
  49        15    CONTINUE
```

```
5C                MX 6,K  M1
51                MX2 6,K  M12
52        14      CONTINUE
53                WRITE  3,103
54                WRITE  3,104  COL I ,I 1,7
        C         WRITE RAW MATRIX
55                DO 16 J 1,6
56                WRITE  3,105  ROW J , MX J,K ,K 1,7
57        16      CONTINUE
        C         WRITE CONVERTED MATRIX
58                WRITE  3,106
59                WRITE  3,104  COL I ,I 1,7
60                DO 17 J 1,6
61                WRITE  3,105  ROW J , MX2 J,K ,K 1,7
62        17      CONTINUE
        C         DETERMINE HI, SEC, THIRD SCORES
63                DO 18 K 1,6
64                W K  MX2 6,K
65        18      CONTINUE
        C         DETERMINE HIGHEST VALUE
66                IFST   1
67                DO 20 I 1,6
68                IF W IFST  .LT. W I+1   GO TO 23
69                GO TO 20
7C        23      IFST   I+1
71        20      CONTINUE
72                W IFST    C.C
73                WRITE  3,107 COL IFST ,MX2 6,IFST
        C         DETERMINE 2ND VALUE
74                ISEC   1
75                DO 21 I 1,6
76                IF W ISEC  .LT. W I+1   GO TO 22
77                GO TO 21
78        22      ISEC   I+1
79        21      CONTINUE
8C                W ISEC    0.C
81                WRITE  3,108 COL ISEC ,MX2 6,ISEC
        C         DETERMINE 3RD VALUE
82                ITRD   1
83                DO 24 I 1,6
84                IF W ITRD  .LT. W I+1   GO TO 25
85                GO TO 24
86        25      ITRD   I+1
87        24      CONTINUE
88                W ITRD    0.0
89                WRITE  3,109 COL ITRD ,MX2 6,ITRD
        C         WRITE SUMMARY DATA TO DISC AND PRINTER
90                WRITE 3,114   ROW I ,I 1,6 , COL I ,I 1,7
91                WRITE 3,113  ID,L1,L2,F1,IFST,ISEC,ITRD, MX2 J,7 ,J 1,6 ,
               X  MX2 6,K ,K 1,7 ,INT,IEOL
92                WRITE  21 IS,111
               X                 ID,L1,L2,F1,IFST,ISEC,ITRD,  MX2 J,K ,K 1,7 ,J 1,6
               X,INT,IEOL
93        10      CONTINUE
94        11      CONTINUE
95                IB    IS-2
96                IS   1
```

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FO  .AN IV VERIC/MCDCO                                                          10/22/74 PAGE C03

 97           WRITE 2100IS,115  IP, A I ,I I,20
       C
       C  CALL PROGRAM TO PRINT STUDENT PROFILE
       C
 98     50    INVOKE STDPRC
       C
 99     51    STOP
100           END

NAME    AT HEX1 DEC1  HEX2 DEC2  NAME    AT HEX1 DEC1  HEX2 DEC2  NAME    AT HEX1 DEC1  HEX2 DEC2
COL     R  045F 01119 047A 01146 ROW     R  047B 01147 0492 01170 W       R  0493 01171 04AA 01194
MX      I  04AB 01195 056E 01390 A       R  056F 01391 05BE 01470 MX2     I  05BF 01471 0682 01666
NI      I  0683 01667 0696 01686 IS      I  0697 01687            I       I  069B 01691
ID      I  069F 01695            L1      I  06A3 01699            L2      I  06A7 01703
F1      R  06AB 01707            K       I  06AF 01711            J       I  06B3 01715
INT     I  06B7 01719            IEOL    I  06BB 01723            MT      I  06BF 01727
MT2     I  06C3 01731            IFST    I  06C7 01735            ISEC    I  06CB 01739
ITRD    I  06CF 01743            IB      I  06D3 01747

                                  ERRORS FOR THIS COMPILATION.

 STATEMENT                             ERROR
  NUMBER                     ISN       NUMBER    SEVERITY    EXPLANATION

    102                                  97          4       STATEMENT NUMBER IS UNREFERENCED
    110                                  97          4       STATEMENT NUMBER IS UNREFERENCED
     50                                  97          4       STATEMENT NUMBER IS UNREFERENCED
     51                                  97          4       STATEMENT NUMBER IS UNREFERENCED

  004 TOTAL ERRORS FOR THIS COMPILATION
  4 WAS THE HIGHEST SEVERITY

    STATEMENT ALLOCATIONS
115   0985  114   0903  113   0A13  112   0A41  111   0A4D  110   0A66  109   0AA4  108   0AD2
107   0B01  106   0B24  105   0B2D  104   0B3E  103   0B56  102   0B5F  101   0B6B  100   0B7F
13    0D03  12    0D1E  15    0D79  14    0D94  16    0E12  17    0E90  18    0EBE  23    0EF9
20    0F02  22    0F6D  21    0F76  25    0FE1  24    0FEA  10    112B  11    112E  50    116C
51    1172
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 3RIS040.0815FORESTER                                          003
 4RIS091.2285INDUSTRIAL ARTS TEACHER                           004
 5RIS003.1875RADIO OPERATOR                                    005
 6RIS320.2814ELECTRICIAN                                       006
 7RIS521.1304MILLER/FOREMAN                                    007
 8RIS700.2814JEWELER                                           008
 9RIS950.7824POWER PLANT OPERATOR                              009
10RIS631.2814POWERHOUSE REPAIRMAN                              010
11RIS        4SKILLED TRADESMAN*                               011
12RIS601.2804TOOL AND DIE MAKER                                012
13RIS638.281GLAZIER                                            013
14RIS683.2804LOOM FIXER                                        014
15RIS526.7813BAKER                                             015
16RIS315.3813COOK                                              016
17RIS915.8673FILLING STATION ATTENDANT                         017
18RIS504.7823HEAT TREATER                                      018
19RIS713.3812OPTICIAN                                          019
20RIS812.8843WELDER                                            020
21RIS614.7823WIRE DRAWER                                       021
22RIS651.8852OFFSET PRESS OPERATOR                             022
23RIE007.0816AUTOMOTIVE ENGINEER                               023
24RIE007.0816MECHANICAL ENGINEER                               024
25RIE010.0815ENGINEER,MINING                                   025
26RIE005.0815CIVIL ENGINEER                                    026
27RIE012.2885INDUSTRIAL ENGINEER TECHNICIAN                    027
28RIE007.1815MECHANICAL ENGINEER TECHNICIAN                    028
29RIE621.2814AIRCRAFT MECHANIC                                 029
30RIE193.1684AIR TRAFFIC CONTROLLER                            030
31RIE620.2814AUTOMOBILE MECHANIC                               031
32RIE715.2814WATCH REPAIRMAN                                   032
33RIE805.2814BOILERMAKER                                       033
34RIE017.2814DRAFTSMAN                                         034
35RIE500.3804ELECTROPLATER                                     035
36RIE620.1314GARAGE FOREMAN                                    036
37RIE421.1814FARMER RANCHER                                    037
38RIE922.3814LINEMAN TEL. & TEL.                               038
39RIE683.3804LOOM CHANGER                                      039
40RIE600.2804MACHINE REPAIRMAN                                 040
41RIE600.2804MACHINIST                                         041
42RIE899.2814MAINTENANCE MAN                                   042
43RIE638.2814MILWRIGHT                                         043
44RIE823.2814MECHANIC,RADIO                                    044
45EIW600.2804MECHANIC*                                         045
46RIE862.3814PLUMBER                                           046
47RIE807.3313AUTOMOBILE BODY REPAIRMAN                         047
48RIE804.2814SHEET METAL MAN                                   047
49RIE953.7823COMPRESSOR HOUSE OPERATOR                         049
50RIE704.8843ENGRAVER,MACHINE                                  050
51RIE611.7823FORGING PRESS OPERATOR                            051
52RIE859.8833HEAVY EQUIPMENT OPERATOR                          052
53RIE866.3813ROOFER                                            053
54RIE806.8873UPHOLSTERER                                       054
55RIE940.8842LOGGER                                            055
56RIE        2MACHINE OPERATOR*                                056
57RIE223.3872TOOL CRIB ATTENDANT                               057
58RIC952.3874LOAD CHECKER                                      058
59RIC771.2814STONE CUTTER                                      059
60RIC604.3804TURRET LATHE OPERATOR                             060
61RIC829.2814ELEVATOR MECHANIC                                 061
62RIC709.2814LOCKSMITH                                         062
63RIC015.3804NUCLEAR REACTOR TECHNICIAN                        063
64RIC406.16[illegible]NURSERYMAN                               064
65RIC4[illegible]4TREE SURGEON                                 065
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[illegible]C740.3814[illegible]                                  066
[illegible]C 72.2814SWITCHMAN TEL. & TEL.                        067
68RI     7.8843[illegible]                                       068
69RIC[illegible].782[illegible]ILL PRESS OPERATOR                069
70RIC342.7823DRY CLEANER                                         070
71RIC503.7823[illegible]                                         071
72RIC504.[illegible]                                             072
73RIC613.7823[illegible]                                         073
74RIC651.7823PRINTER                                             074
75RIC222.3873SHIPPING/RECEIVING CLERK                            075
76RIC801.7813STRUCTURAL STEEL WORKER                             076
77RIC750.8843TIRE BUILDER                                        077
78RIC365.3813SHOE REPAIRMAN                                      078
79RIC919.8832TEAMSTER                                            079
80RIC407.8842GROUNDS KEEPER                                      080
81RAI973.3814COMPOSITOR  TYPESETTER                              081
82RAI977.8843[illegible]                                         082
83RSE610.3814BLACKSMITH                                          083
84RSE910.3834FIREMAN, LOCOMOTIVE                                 084
85RSE862.3814GAS MAIN-FITTER                                     085
86RSE513.3814MOLDER  FOUNDRY                                     086
87RSE862.3814PIPEMAN                                             087
88RSE198.1664RAILROAD CONDUCTOR                                  088
89RSE330.4713BARBER                                              089
90RSE316.8843BUTCHER                                             090
91RSE375.2683POLICEMAN  PATROLMAN                                091
92RSE376.8683DETECTIVE                                           092
93RSE922.8933COAL EQUIPMENT OPERATOR                             093
94RSE373.8843FIREMAN  FIRE FIGHTER                               094
95RSE913.3633MOTORMAN  STREETCAR                                 095
96RSE913.4633TAXICAB DRIVER                                      096
97RSE913.8833CHAUFFEUR                                           097
98RSE311.8783WAITRESS  WAITER                                    098
99RSE319.8782FOUNTAIN MAN                                        099
100RSE        2LABORER,GUARD,JANITOR,WATCHMAN,WAREHOUS          100
101RSE915.8782PARKING LOT ATTENDANT                              101
102RSE240.3683BILL COLLECTOR                                     102
103RSC388.8682ELEVATOR OPERATOR                                  103
104RSC929.8872STOCKMAN                                           104
105RSC318.8871KITCHEN HELPER                                     105
106RSI051.2285VOCATIONAL AGRICULTURE TEACHER                     106
107RSI637.2814GASAPPLIANCE SERVICEMAN                            107
108RSI683.7823WEAVER                                             108
109RSI685.8852KNITTER                                            109
110REC302.8872LAUNDRESS                                          110
111REC323.8872MAID                                               111
112REI637.2814AIR CONDITIONING ENGINEER MECHANIC                 112
113REI530.1324FOREMAN                                            113
114REI157.1334SHIPPILOT                                          114
115 EI863.8872TRACKMAN                                           115
116RES379.1685FISH AND GAME WARDEN                               116
117RES910.3834RAILROAD ENGINEER                                  117
118RES413.1814CATTLE RANCHER                                     118
119RES920.8843CRATER AND PACKER                                  119
120RES910.8843RAILROAD BRAKEMAN                                  120
121RES223.3873STOCK CLERK                                        121
122RES431.8842FISHERMAN                                          122
123RCI081.1885SURVEYOR                                           123
124RCI710.2814INSTRUMENT MECHANIC                                124
125RCI960.3824MOTION PICTURE PROJECTIONIST                       125
126RCI633.2814TYPEWRITER REPAIRMAN                               126
127RCI860.3814CARPENTER                                          127
128RCI840.7813PAINTER  HOUSE, BUILDING, EQUIPMENT                128
129RCI018.5873RODMAN                                             129
130RCS822.2814INSTALLER REPAIRMAN                                130
131RCS785.2614TAILOR                                             131
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1[illegible]CS785.3613SEAMSTRESS                                   132
133RC    1.7813TILE SETTER                                        133
134RC    9.2813PLASTER                                            134
135RCS861.3813BRICKLAYER                                          135
136RCS913.4633BUS DRIVER                                          136
137RCS844.8843CEMENT MASON                                        137
138RCS785.3613DRESSMAKER                                          138
139RCS558.7823FURNACEMAN                                          139
140RCS233.3883MAIL CARRIER                                        140
141RCS239.5883METER READER                                        141
142RCS850.7813MINER                                               142
143RCS911.8873SAILOR  SEAMAN                                      143
144RCS842.7813PLASTERER                                           144
145RCS922.8832INDUSTRIAL TRUCK OPERATOR                           145
146RCS682.8852SPINNER                                             146
147RCE921.8833CRANEMAN                                            147
148RCE589.6873GRADER                                              148
149RCE905.8833TRUCK DRIVER                                        149
150RCE929.8833TRACTOR OPERATOR                                    150
151RCE922.8832FORK LIFT OPERATOR                                  151
152IAS050.0886ECONOMIST                                           152
153IAS070.1086INTERNIST  PHYSICIAN                                153
154IAR055.0886ANTHROPOLOGIST                                      154
155IAR021.0886ASTRONOMER                                          155
156IAR070.1086PATHOLOGIST                                         156
157IAR023.0816PHYSICIST                                           157
158IAR022.0816CHEMIST                                             158
159ISC012.1885PRODUCTION PLANNER                                  159
160ISC078.3814MEDICAL-LABORATORY ASSISTANT                        160
161ISC720.2814REPAIRMAN, TV                                       161
162ISR041.0816BIOLOGIST                                           162
163ISR071.1086OSTEOPATH                                           163
164ISR079.1085CHIROPRACTOR                                        164
165ISR091.2285MATHEMATICS TEACHER                                 165
166ISR091.2285NATURAL SCIENCE TEACHER                             166
167ISR079.1085OPTOMETRIST                                         167
168ISA070.1086PHYSICIAN*                                          168
169ISA070.1086PSYCHIATRIST                                        169
170ISA045.0886PSYCHOLOGIST                                        170
171ISA078.3815MEDICAL TECHNOLOGIST                                171
172IES041.0816BACTERIOLOGIST                                      172
173IES041.0816PHYSIOLOGIST                                        173
174IES074.1815PHARMACIST                                          174
175IES011.2814RESEARCH ANALYST                                    175
176IEC020.1885ACTUARY                                             176
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727RI   0C.2814JEWELLER                                            008
728RI   0C.7824POWER PLANT OPERATOR                                009
729RIS631.2814POWERHOUSE REPAIRMAN                                 010
730RIS601.2804TOOL AND DIE MAKER                                   012
731RIE621.2814AIRCRAFT MECHANIC                                    029
732RIE620.2814AUTOMOBILE MECHANIC                                  031
733RIE805.2814BOILERMAKER                                          033
734RIE017.2814DRAFTSMAN                                            034
735RIE500.3804ELECTROPLATER                                        035
736RIE822.3814LINEMAN TEL. & TEL.                                  038
737RIE683.3804LOOM CHANGER                                         039
738RIE600.2804MACHINIST                                            041
739RIE859.2814MAINTENANCE MAN                                      042
740RIE823.2814MECHANIC,RADIO                                       044
741E W600.2804MECHANIC*                                            045
742RIE804.2814SHEET METAL MAN                                      047
743RIC771.2814STONE CUTTER                                         059
744RIC604.3804TURRET LATHE OPERATOR                                060
745RIC829.2814ELEVATOR MECHANIC                                    061
746RIC015.3804NUCLEAR REACTOR TECHNICIAN                           063
747RIC822.2814SWITCHMAN TEL. & TEL.                                067
748RAI973.3814COMPOSITOR  TYPESETTER                               081
749RSE610.3814BLACKSMITH                                           083
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751RSE862.3814GAS MAIN-FITTER                                      085
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978RIE620.1314GARAGE FOREMAN                                            036
979IEC02C.1885ACTUARY                                                   176
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SAMPLE RUN , *C*A*O*S*

RAW MATRIX
      REAL     INVE     ARTI     SOCI     ENTE     CONV     TOTA
ACTI     3        2        0        4        2        2       13
COMP     1        8        3        0        0        2       14
OCCU     1        1        2        1        0        1        6
SLF1     2        4        2        3        1        1       13
SLF2     3        2        4        4        4        3       20
TOTA    10       17       11       12        7        9       66

CONVENTED MATRIX
      REAL     INVE     ARTI     SOCI     ENTE     CONV     TOTA
ACTI    27       18        0       36       18       18      117
COMP     9       72       27        0        0       18      126
OCCU     7        7       14        7        0        7       42
SLF1    40       80       40       60       20       20      260
SLF2    60       40       80       80       80       60      400
TOTA   143      217      161      183      118      123      945
THE HIGHEST VALUE IS INVE VALUE   217
THE SECOND VALUE IS SOCI VALUE   183
THE THIRD VALUE IS ARTI VALUE   161
ID     LAST    FIRST  HI MD LO      ACTI  COMP  OCCU  SLF1  SLF2  TOTA  REAL  INVE  ARTI  SOCI  ENTE  CONV  TOTA
32500 JOHNS    BILL  2  4  3        117   126    42   260   400   945   143   217   161   183   118   123   945
INT-  2 ED-   3
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gc  ) ax2

    Now that you have studied all about the 8 major categories of occupations, the
next step in our program is for you to evaluate them with regard to your own in-
terests. Assign a weight of 1 to 10 to each of the 8 categories. Rate the one that
interests you the most as 10, and the one that interests you the least as 1. You
may use one number more than once.

service
2
business
4
recreation
3
outdoors
5
technical.
10
education
3
science
3
business (contact)
6


    It is not enough to expand your career alternatives only from your interest area. You
must also consider career realities like the amount of education required to enter certain
occupations. In your best liked interest areas, you should look at the occupations that
are available at each of the levels of education. These levels are less than a full high
school education, a high school education, education recieved at a technical or vocation-
al school, a two year or Jr. College, or a four year college or beyond.

    After you have thought about career oppertunities in each educational level, you
will evaluate the levels. To do this assign a weight of 10 to the educational level at
which you think you are most likely to end up at. Then assign a weight of 1 to the lev-
el that you are least likely to end up at. Assign weights to the remaining levels in the
same manner. You may assign the same weight to different levels.

college
10
Jr. college
7
vocational school
8
high school
4
high school dropout
```

```
Jr. college
7
vocational school
8
high school
4
high school dropout
2

                      service  bus.  recreation  outdoors  tech.  education  science  bus. contact
college                 20      40      30         50       100      30        90        60
Jr. college             14      28      21         35        70      21        63        42
vocation school         16      32      24         40        80      24        72        48
high school              8      16      12         20        40      12        36        24
high school dropout      4       8       6         10        20       6        18        12

END OF COURSE PLEASE SIGN OFF.
author
TYPE COMMAND
```

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```
CDM/CDM
 /14/73    13:35    line    1
YOUR NAME IS CDM TEAM
BLOCKS =    70  TIME =    18:34
TYPE COMMAND
type CDM
  CDM
    0-   1 ld 1/p21
    1-   0 qu Rate each occupation field 1 to 10,10 being the highest.

    2-   0 qu service

    2-   1 ep
    2-   2 sb 1/c23
    2-   3 ld 248/c1
    2-   4 ld b0,0,(c23)/c1
    2-   5 br err/c1,e,248
  busine
TYPE COMMAND
type busine
  busine
    1-   0 qu business

    1-   1 ep
    1-   2 sb 1/c23
    1-   3 ld 248/c2
    1-   4 ld b0,0,(c23)/c2
    1-   5 br bus/c2,e,248
  recrea
TYPE COMMAND
type recrea
  recrea
    1-   0 qu recreation

    1-   1 ep
    1-   2 sb 1/c23
    1-   3 ld 248/c3
    1-   4 ld b0,0,(c29)/c3
    1-   5 br rec/c3,e,248
  outdoo
TYPE COMMAND
type outdoo
  outdoo
    1-   0 qu outdoors

    1-   1 ep
    1-   2 sb 1/c23
    1-   3 ld 248/c4
    1-   4 ld b0,0,(c23)/c4
```

```
      1-   4 ld b0,0,(c29)/c4
      1-   5 br out/c4,e,248
   techni
TYPE COMMAND
type techni
   techni
      1-   0 qu techni cal

      1-   1 ep
      1-   2 sb 1/c23
      1-   3 ld 248/c5
      1-   4 ld b0,0,(c29)/c5
      1-   5 br tec/c5,e,248
   educat
TYPE COMMAND
type educat
   educat
      1-   0 qu educati on

      1-   1 ep
      1-   2 sb 1/c23
      1-   3 ld 248/c6
      1-   4 ld b0,0,(c29)/c6
      1-   5 br edu/c6,e,248
   sci enc
TYPE COMMAND
type sci enc
   sci enc
      1-   0 qu sci ence

      1-   1 ep
      1-   2 sb 1/c23
      1-   3 ld 248/c7
      1-   4 ld b0,0,(c29)/c7
      1-   5 br sci /c7,e,248
   buscon
TYPE COMMAND
type buscon
   buscon
      1-   0 qu busi ness (contact)

      1-   1 ep
      1-   2 sb 1/c23
      1-   3 ld 248/c8
      1-   4 ld b0,0,(c29)/c8
      1-   5 br buc/c8,e,248
      1-   6 ty
      1-   7

      1-   8 tx Rate the educati on levels 1 to 10.10 bei ng the hi ghest.
      Kindly rate the education levels 1 to 10,10 being the highest.
    1- 9

  colleg
TYPE COMMAND
type colleg
  colleg
    1-  0 qu college

    1-  1 ep
    1-  2 sb 1/c29
    1-  3 ld 345/c9
    1-  4 ld b0,0,(c29)/c9
    1-  5 br col/c9,e,345
    1-  6 ld c9/c10
    1-  7 ld c9/c11
    1-  8 ld c9/c12
    1-  9 ld c9/c13
    1- 10 ld c9/c14
    1- 11 ld c9/c15
    1- 12 ld c9/c16
    1- 13 mp c1/c9
    1- 14 ld c9/b1,0,4
    1- 15 mp c2/c10
    1- 16 ld c10/b1,4,4
    1- 17 mp c3/c11
    1- 18 ld c11/b1,8,4
    1- 19 mp c4/c12
    1- 20 ld c12/b1,12,4
    1- 21 mp c5/c13
    1- 22 ld c13/b1,16,4
    1- 23 mp c6/c14
    1- 24 ld c14/b1,20,4
    1- 25 mp c7/c15
    1- 26 ld c15/b1,24,4
    1- 27 mp c8/c16
    1- 28 ld c16/b1,28,4
  jrcoll
TYPE COMMAND
type jrcoll
  jrcoll
    1-  0 qu Jr . college

    1-  1 ep
    1-  2 sb 1/c29
    1-  3 ld 345/c9
    1-  4 ld b0,0,(c29)/c9
    1-  5 br jrc/c9,e,345
    1-  6 ld c9/c10
    1- 18 ld c11/b2,8,4
    1- 19 mp c4/c12
    1- 20 ld c12/b2,12,4
    1- 21 mp c5/c13
    1- 22 ld c13/b2,15,4
    1- 23 mp c6/c14
    1- 24 ld c14/b2,20,4
    1- 25 mp c7/c15
    1- 26 ld c15/b2,24,4
    1- 27 mp c8/c16
    1- 28 ld c16/b2,28,4
  highsc
TYPE COMMAND
type highsc
  highsc
    1-  0 au high school

    1-  1 ep
    1-  2 sb 1/c29
    1-  3 ld 345/c9
    1-  4 ld b0,0,(c29)/c9
    1-  5 br hig/c9,e,345
    1-  6 ld c9/c10
    1-  7 ld c9/c11
    1-  8 ld c9/c12
    1-  9 ld c9/c13
    1- 10 ld c9/c14
    1- 11 ld c9/c15
    1- 12 ld c9/c16
    1- 13 mp c1/c9
    1- 14 ld c9/b2,40,4
    1- 15 mp c2/c10
    1- 16 ld c10/b2,44,4
    1- 17 mp c3/c11
    1- 18 ld c11/b2,48,4
    1- 19 mp c4/c12
    1- 20 ld c12/b2,52,4
    1- 21 mp c5/c13
    1- 22 ld c13/b2,56,4
    1- 23 mp c6/c14
    1- 24 ld c14/b2,60,4
    1- 25 mp c7/c15
    1- 26 ld c15/b2,64,4
    1- 27 mp c8/c16
    1- 28 ld c16/b2,68,4
  dropou
TYPE COMMAND
type dropou
please repeat
type dropou
```

```
please repeat
type dropou
   opou
     1-  0 qu high school dropout

     1-  1 ep
     1-  2 sb 1/c29
     1-  3 ld 345/c9
     1-  4 ld b0,0,(c29)/c9
     1-  5 br dro/c9,e,345
     1-  6 ld c9/c10
     1-  7 ld c9/c11
     1-  8 ld c9/c12
     1-  9 ld c9/c13
     1- 10 ld c9/c14
     1- 11 ld c9/c15
     1- 12 ld c9/c16
     1- 13 mp c1/c9
     1- 14 ld c9/b3,0,4
     1- 15 mp c2/c10
     1- 16 ld c10/b3,4,4
     1- 17 mp c3/c11
     1- 18 ld c11/b3,8,4
     1- 19 mp c4/c12
     1- 20 ld c12/b3,12,4
     1- 21 mp c5/c13
     1- 22 ld c13/b3,16,4
     1- 23 mp c6/c14
     1- 24 ld c14/b3,20,4
     1- 25 mp c7/c15
     1- 26 ld c15/b3,24,4
     1- 27 mp c8/c16
     1- 28 ld c16/b3,28,4
     1- 29 ld    /b1,32,7
     1- 30 ld    /b1,72,15
     1- 31 ld    /b2,32,7
     1- 32 ty
     1- 33

     1- 34 ty b1
     1- 35

     1- 36

     1- 37 ty b2
     1- 38

     1- 39
```

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```
          ty
    1- 41

       42

  err
TYPE COMMAND
type err
  err
    0-   1 ea
    0-   2 ty You di d not typei n a number . Please type i n a number  fr om 1 to 10.

    0-   3 br  CDM
  bus
TYPE COMMAND
type bus
  bus
    0-   1 ea
    0-   2 ty You di d not type i n a number . Please type i n a number  fr om 1 to 10.

    0-   3 br  busi ne
  r ec
TYPE COMMAND
type r ec
  r ec
    0-   1 ea
    0-   2 ld You di d not type i n a number . lease type i n a number  fr om 1 to 10.
/b5
    0-   3 ty b5
    0-   4 br r ecr ea
  out
TYPE COMMAND
type out
  out
    0-   1 ea
    0-   2 ty b5
    0-   3 br outdoo
  tec
TYPE COMMAND
type tec
  tec
    0-   1 ea
    0-   2 ty b5
    0-   3 br techni
  edu
TYPE COMMAND
type edu
  edu
    0-   1 ea
    0-   2 ty b5
    0-   1 ea
    0    2 ty b5
    0    3 br educat
  sci
TYPE COMMAND
type sci
  sci
    0-   1 ea
    0-   2 ty b5
    0-   3 br scienc
  buc
TYPE COMMAND
type buc
  buc
    0-   1 ea
    0-   2 ty b5
    0-   3 br buscon
  col
TYPE COMMAND
type col
please repeat
type col
  col
    0-   1 ea
    0-   2 ld You did not type in a number . type in a number from 1 to 5.
/b4
    0-   3 ty b4
    0-   4 br colleg
  jrc
TYPE COMMAND
type jrc
  jrc
    0-   1 ea
    0-   2 ty b4
    0-   3 br jrcoll
  voc
TYPE COMMAND
type voc
  voc
    0-   1 ea
    0-   2 ty b4
    0-   3 br vocatl
  hig
TYPE COMMAND
type hig
  hig
    0-   1 ea
    0-   2 ty b4
    0-   3 br highsc
  dro
```

```
    0-  3 br  highsc
  dr
TYPE COMMAND
type dro
  dro
    0-  1 ea
    0-  2 ty b4
    0-  3 br  dropou
  quiz
TYPE COMMAND
type quiz
  quiz
    1-  0 qu Your interests decide what you like!  If you enjoy working with people there are

    1-  1    a great deal of jobs available to you.  The same holds true if you enjoy working

    1-  2    with things.  The following exercizes test your knowledge of jobs available in

    1-  3    the fields of people and things.

    1-  4    A teacher works daily with students providing them with an education.  Thus, the

    1-  5    job of a teacher involves working with people.  A mechanic works in repairing machines.

    1-  6    Thus the job of a mechanic involves working with things.  Now you are ready to look

    1-  7    at a job and select which catagory (people or things) it falls under.

    1-  8    The job of a salesman involves working with__________

    1-  9 ca people
    1- 10 ty excellent

    1- 11 wa things
    1- 12 ty Your answer is incorrect.  A salesman works with people in places of business.

    1- 13    Type the correct answer.

    1- 14 un You did not type people or things.  Please try again and type one of them.

    2-  0 qu The job of a nurse involves working with__________

    2-  1 ca people
    2-  2 ty excellent

    2-  3 wa things
```

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```
2-   3 wa things
     4 ty Yuor answer is incorrect.  A nurse   rks with people in hospitals and health   ces.

2-   5    Type the correct answer.

  ROY
TYPE COMMAND
typeROY
INVALID COMMAND
TYPE COMMAND
type ROY
  ROY
  end
TYPE COMMAND
sign off
LINE IS SIGNED OFF
ax1/ax1
06/14/73   14:05   line   1
YOUR NAME IS ax1
BLOCKS =    0  TIME =    9:29
TYPE COMMAND
type ax1
  ax1
   1-   0 qu Your interests decide what you like!  If you enjoy working with people, there are

   1-   1    a great deal of jobs available to you.  The same holds true if you enjoy working

   2-   0 qu with things.  The following exercizes test your knowledge of jobs available in

   2-   1    the fields of people and things.


   2-   2    A teacher works daily with students providing them with an education.  Thus the

   2-   3    job of a teacher involves working with people.  A mechanic works in repairing

   2-   4    machines.  Thus the job of a mechanic involves working with things.


   2-   5    Now you are ready to look at a job and select which category (people or things)

   2-   6    it falls under.


   2-   7    The job of a salesman involves working with________________

   2-   8 ca people
   2-   9 ty excellent
```

```
2- 10 wa things
2- 11 ty Your answer is incorrect.  A salesman works with people daily in both stores and

2- 12 ty places of business.  Please type the correct answer.
2- 13

2- 14 un You did not type people or  things.  Please try again and type one of them.

3-  0 qu The job of a nurse involves working with____________________

3-  1 ca people
3-  2 ty excellent


3-  3 wa things
3-  4 ty Your answer is incorrect.  A nurse works with people daily in a hospital, providing

3-  5 ty them with the care they need.  Type the correct answer.

3-  6 un You did not type people or  things.  Please try again and type one of them.

4-  0 qu The job of an accountant involves working with________________

4-  1 ca things
4-  2 ty excellent


4-  3 wa people
4-  4 ty Your answer is incorrect because an accountant works with mathematics.  Please

4-  5    type the correct answer.

4-  6 un You did not type people or things.  Please try again and type one of them.

5-  0 qu The job of a forest ranger involves working with__________________

5-  1 ca things

5-  2 ty excellent


5-  3 wa people
5-  4 ty Your answer is incorrect.  A forest ranger works with things in nature.  Please
```

```
      5- 3 wa people
      5- 4 ty Your answer is incorrect.  A forest  anger works with things in nature.  Please

      5- 5    type the correct answer.

      5- 6 un You did not type people or things.  Please try again and type one of them.


      6- 0 qu    Do you think you know enough about working with people and things to take a little

      6- 1    quiz?  Type yes or no.

      6- 2 ca yes
      6- 3 br quiz
      6- 4 ca no
      6- 5 br review
      6- 6 un Please type yes or no.

  quiz
TYPE COMMAND
type quiz
  quiz
    1-  0 qu
                 Okay you smarty!  Try and list 5 occupations dealing with people and then 5

      1- 1    occupations dealing with things.


      1- 2    people-

      1- 3 ep
      2- 0 qu things-

      2- 1 ep
      3- 0 qu
                 Did you have a hard time?  If you would like a little more review, type review.  If

      3- 1    you would like to continue with the program, type go.

      3- 2 ca review
      3- 3 br review
      3- 4 ca go
      3- 5 br go
      3- 6 un Please type review or go.


  review
TYPE COMMAND
type review
```

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```
type [illegible]iew
  revi
   1-  J qu
            Sorry our explanations were not clear enough.  Here are lists of more occupations

   1-  1    dealing with people and things.  Maybe they will help you understand.

   1-  2              PEOPLE                        THINGS

   1-  3

   1-  4    public relations man          computer programer

   1-  5    doctor                        pilot

   1-  6    lawyer                        T.V. repair man

   1-  7    politician                    chemist

   1-  8    waitress                      electrician

   1-  9    stewardess                    lumberjack

   1- 10    immigration officer           telephone lineman

   1- 11
            Study these lists and when you feel that you are ready to take a quiz, type quiz.

   1- 12 ca quiz
   1- 13 br quiz
   1- 14 un Please type quiz.
   1- 15

  go
TYPE COMMAND
type go
  go
   1-  0 qu
            Now let's look deeper into the area of occupations dealing with people.  You can

   1-  1    look at jobs in the categories of service, education, business (contact), and rec-

   1-  2    reation.

   1-  3        The service category involves serving or helping people, like waiting on people or

   1-  4    being some kind of helper.  Nursing is a good example of this.
```

```
        need some kind of helper.  Nursing is a good example of this.  The education category
1-  5   involves occupations which deal wit  the teaching or  training of people like a prin-
1-  6   cipal or  teacher.  The business contact category involves providing goods and services
1-  7   to people, as a salesman or  cashier.  The recreation category involves jobs which help
1-  8   people make better use of their  leisure time.  Examples are artists and entertainers.
1-  9
           Now some occupations will be given.  You are to place them in thier proper category
1- 10   of either service, education, business (contact), or  recration.
1- 11
        The job of a Travel Agent is in the category of_________________

1- 12 ca business
1- 13 ty very good

1- 14 ca business (contact)
1- 15 ty very good

1- 16 wa recreation
1- 17 wb service
1- 18 wb education
1- 19 ty Your  answer is incorrect.  Please try again.

1- 20 un You did not follow directions.  Please type one of the categories listed above.

2-  0 qu
        The job of a stewardess is in the category of_________________
2-  1

2-  2 ca service
2-  3 ty very good

2-  4 wa education
2-  5 wb business
2-  6 wb business (contact)
2-  7 wb recreation
2-  8 ty Your  answer is incorrect.  Please try again.

2-  9 un You did not follow directions.  Please type one of the categories listed above.

3-  0 qu The job of ski instructor is in the category of
```

```
2-  9 un You did not follow directions.  Plea-- type one of the categories listed above-
3-  0 qu The job of ski instructor is in the category of____________________
3-  1 ca recreation
3-  2 ty Very good.  It could also be in the category of education.


3-  3 ca education
3-  4 ty ery good.  It could also be in the category of recreation.


3-  5 wa service
3-  6 wb business
3-  7 wb business (contact)
3-  8 ty You- answer is incorrect.  Please try again.
 3-  8 ty Your answer is incorrect.  Please try again.
3-  9 un You did not follow directions.  Please type one of the categories listed above.
4-  0 qu    Let's now look deeper into the area of occupations dealing with things.  You can look at
4-  1    jobs in the categories of business, technology, outdoors, and science.

4-  2       The business category involves organizing imformation, like an accountant or exec-
4-  3    utive does.  The technology category involves providing mechanical services to people
4-  4    or businesses.  The job of an X-ray technician is in this category.  The outdoors cate-
4-  5    gory involves working in the out-of-doors, as a landscaper or forest ranger.  Jobs
4-  6    in the category of science involve expanding scientific knowledge through research, as
4-  7    a biologist does.
4-  8
         Now some occupations will be given.  You are to put them in the category of busi-
4-  9    ness, technology, outdoors, or science.

4- 10    The job of a cowboy is in the category of__________________
4- 11 ca outdoors
```

```
4- 11 ca outdoors
4- [illegible] ty Very good


4- 13 wa science
4- 14 wb business
4- 15 wb technology
4- 16 ty Your answer is incorrect.  Please try again.

4- 17 un You did not follow directions.  Please type one of the categories listed above.

5-  0 qu The job of a chemist is in the category of_____________

5-  1 ca science
5-  2 ty Very good


5-  3 wa business
5-  4 wb outdoors
5-  5 wb technology
5-  6 ty Your answer is incorrect.  Please try again.

5-  7 un You did not follow directions.  Please type one of the categories listed above.

6-  0 qu The job of a labratory technician is in the category of___________

6-  1 ca science
6-  2 ty Very good.  It could also be in the category of technolgy.


6-  3 ca technology
6-  4 ty Very good.  It could also be in the category of science.


6-  5 wa business
6-  6 wb outdoors
6-  7 ty Your answer is incorrect.  Please try again.

6-  8 un You did not follow directions.  Please type one of the categories listed above.

7-  0 qu    Now that you have studied the 8 major occupation areas, do you think that you could

7-  1      list a few jobs in each?  Type yes or no.

7-  2 ca yes
7-  3 br chall.
7-  4 ca no
7-  5 br restud
chall
```

```
        5 br restud
  ch
TYPE C  IAND
type chall
 ARGUMENT  1 INVALID
TYPE COMMAND
type chall.
  chall.
    1-  0 qu
                Try and list 3 occupations within each of the 8 major areas of occupations.  They

    1-  1     are again service, education, business contact), recreation, business, technology,

    1-  2     outdoors, and science.


    1-  3     service-

    1-  4 ep
    2-  0 qu education-

    2-  1 ep
    3-  0 qu business (contact)-

    3-  1 ep
    4-  0 qu recreation-


    4-  1 ep
    5-  0 qu business-

    5-  1 ep
    6-  0 qu technology

    6-  1 ep
    7-  0 qu outdoors-

    7-  1 ep
    8-  0 qu science-

    8-  1 ep
    9-  0 qu
                How did it go?  If you would like to review a bit more, type review.  If you would

    9-  1     like to continue with the program, type go.

    9-  2 ca review
    9-  3 br restud
    9-  4 ca go
    9-  5 br contin
    1   4 ca go
    9     br contin
  restud
TYPE COMMAND
type restud
  restud
    1-  0 qu

              It was'nt too clear, huh?  Well maybe this review will help.  Here are lists of all

    1-  1    of the 8 major areas of occupations and some jobs that fall under each.


  end
TYPE COMMAND
sign off
LINE IS SIGNED OFF
ax2/ax2
06/14/73    14:26    line    1
YOUR NAME IS ax2
BLOCKS =     0  TIME =     8:54
TYPE COMMAND
      type ax2
        ax2
          0-   1 ld 1/p13
          0-   2 br chall.
          1-   0 qu
                     Now that you have studied all about the 8 major categories of occupations, the

          1-   1    next step in our program is for you to evaluate them with regard to your own in-

          1-   2    terests.  Assign a weight of 1 to 10 to each of the 8 categories.  Rate the one that

          1-   3    interests you the most as 10, and the one that interests you the least as 1.  You

          1-   4    may use one number more than once.


          2-   0 pr
          2-   1 ld 1/p21
          3-   0 qu service


          3-   1 ep
          3-   2 sb 1/c29
          3-   3 ld 248/c1
          3-   4 ld b0,0,c29)/c1
          3-   5 br err/c1,e,248
        busine
    3-   5 br  orr/c1,e,248
  busine
T   : COMMAND
type busine
  busine
    1-   0 qu business

    1-   1 ep
    1-   2 sb 1/c29
    1-   3 ld 248/c2
    1-   4 ld b0,0,(c29)/c2
    1-   5 br bus/c2,e,248
  recrea
TYPE COMMAND
type recrea
  recrea
    1-   0 qu recreation

    1-   1 ep
    1-   2 sb 1/c29
    1-   3 ld 248/c3
    1-   4 ld b0,0,(c29)/c3
    1-   5 br rec/c3,e,248
  outdoo
TYPE COMMAND
type outdoo

FORMAT ERROR
TYPE COMMAND
type outdoo
  outdoo
    1-   0 qu outdoors

    1-   1 ep
    1-   2 sb 1/c29
    1-   3 ld 248/c4
    1-   4 ld b0,0,(c29)/c4
    1-   5 br out/c4,e,248
  techni
TYPE COMMAND
type techni
  techni
    1-   0 qu technical

    1-   1 ep
    1-   2 sb 1/c29
    1-   3 ld 248/c5
    1-   4 ld b0,0,(c29)/c5
    1-   5 br tec/c5,e,248
  educat
  -   5 lr  tec/c5,e,248
   dcat
T    COMMAND
type educat
  educat
    1-   0 qu education

    1-   1 ep
    1-   2 sb  1/c29
    1-   3 ld  248/c6
    1-   4 ld  b0,0,(c29)/c6
    1-   5 br  edu/c6,e,248
  scienc
TYPE COMMAND
type scienc
  scienc
    1-   0 qu  science

    1-   1 ep
    1-   2 sb  1/c29
    1-   3 ld  248/c7
    1-   4 ld  b0,0,(c29)/c7
    1-   5 br  sci/c7,e,248
  buscon
TYPE COMMAND
type buscon
  buscon
    1-   0 qu  business (contact)

    1-   1 ep
    1-   2 sb  1/c29
    1-   3 ld  248/c8
    1-   4 ld  b0,0,(c29)/c8
    1-   5 br  buc/c8,e,248
    1-   6 ty
    1-   7

    1-   8

    2-   0 qu
                It is not enough to expand your career alternatives only from your interest area.

    2-   1    must also consider career realities like the amount of education required to enter cer

    2-   2    occupations.  In your best liked interest areas, you should look at the occupations th

    2-   3    are available at each of the levels of education.  These levels are less than a full hi

    2-   4    school education, a high school education, education recieved at a technical or vocati
```

```
2-  4   school education, a high school education, education recieved at a techni al or vocati
2-  5   al school, a two year or Jr. College, or a four year college or beyond.
2-  6
           After you have thought about career opportunities in each educational level, you
2-  7   will evaluate the levels. To do this assign a weight of 10 to the educational level a
2-  8   which you think you are most likely to end up at. Then assign a weight of 1 to the le
2-  9   el that you are least likely to end up at. Assign weights to the remaining levels in
2- 10   same manner . You may assign the same weight to different levels.

2- 11

  colleg
TYPE COMMAND
type colleg
  colleg
    1-  0 qu college

    1-  1 ep
    1-  2 sb 1/c29
    1-  3 ld 345/c9
    1-  4 ld b0,0,(c29)/c9.
    1-  5 br col/c9,e,345
    1-  6 ld c9/c10
    1-  7 ld c9/c11
    1-  8 ld c9/c12
    1-  9 ld c9/c13
    1- 10 ld c9/c14
    1- 11 ld c9/c15
    1- 12 ld c9/c16
    1- 13 mp c1/c9
    1- 14 ld c9/b1,0,4
    1- 15 mp c2/c10
    1- 16 ld c10/b1,9 ,4
    1- 17 mp c3/c11
    1- 18 ld c11/b1,18,4
    1- 19 mp c4/c12
    1- 20 ld c12/b1,27,4
    1- 21 mp c5/c13
    1- 22 ld c13/b1,36,4
    1- 23 mp c6/c14
    1- 24 ld c14/b1,45,4
    1- 25 mp c7/c15
    1- 25 mp c7/c15
    1- 26 ld c15/h1,54,4
    1- 27 mp c8/c16
    1- 28 ld c16/h1,63,4
  jrcoll
TYPE COMMAND
type jrcoll
  jrcoll
    1-  0 qu Jr . college

    1-  1 ep
    1-  2 sb 1/c29
    1-  3 ld 345/c9
    1-  4 ld b0,0,(c29)/c9
    1-  5 br jrc/c9,e,345
    1-  6 ld c9/c10
    1-  7 ld c9/c11
    1-  8 ld c9/c12
    1-  9 ld c9/c13
    1- 10 ld c9/c14
    1- 11 ld c9/c15
    1- 12 ld c9/c16
    1- 13 mp c1/c9
    1- 14 ld c9/b2,0,4
    1- 15 mp c2/c10
    1- 16 ld c10/b2,9,4
    1- 17 mp c3/c11
    1- 18 ld c11/b2,18,4
    1- 19 mp c4/c12
    1- 20 ld c12/b2,27,4
    1- 21 mp c5/c13
    1- 22 ld c13/b2,36,4
    1- 23 mp c6/c14
    1- 24 ld c14/b2,45,4
    1- 25 mp c7/c15
    1- 26 ld c15/b2,54,4
    1- 27 mp c8/c16
    1- 28 ld c16/b2,63,4
  vocati
TYPE COMMAND
type vocati
  vocati
    1-  0 qu vocational school

    1-  1 ep
    1-  2 sb 1/c29
    1-  3 ld 345/c9
    1-  4 ld b0,0,(c29)/c9
    1-  5 br voc/c9,e,345
```

```
i-  5 br  voc/c9 ,e ,345
1-  6 ld c9/c10
1-  7 ld c9/c11
1-  8 ld c9/c12
1-  9 ld c9/c13
1- 10 ld c9/c14
1- 11 ld c9/c15
1- 12 ld c9/c16
1- 13 mp c1/c9
1- 14 ld c9/b3,0,4
1- 15 mp c2/c10
1- 16 ld c10/b3,9 ,4
1- 17 mp c3/c11
1- 18 ld c11/b3,18,4
1- 19 mp c4/c12
1- 20 ld c12/b3,27,4
1- 21 mp c5/c13
1- 22 ld c13/b3,36,4
1- 23 mp c6/c14
1- 24 ld c14/b3,45,4
1- 25 mp c7/c15
1- 26 ld c15/b3,54,4
1- 27 mp c8/c16
1- 28 ld c16/b3,63,4
  highsc
TYPE COMMAND
type highsc
  highsc
    1-  0 qu high school

    1-  1 ep
    1-  2 sb 1/c29
    1-  3 ld 345/c9
    1-  4 ld b0,0,(c29 )/c9
    1-  5 br  hig/c9 ,e,345
    1-  6 ld c9/c10
    1-  7 ld c9/c11
    1-  8 ld c9/c12
    1-  9 ld c9/c13
    1- 10 ld c9/c14
    1- 11 ld c9/c15
    1- 12 ld c9/c16
    1- 13 mp c1/c9
    1- 14 ld c9/b4,0,4
    1- 15 mp c2/c10
    1- 16 ld c10/b4,9 ,4
    1- 17 mp c3/c11
    1- 18 ld c11/b4,18,4
```

```
      [illegible]
  1- 18 ld c11/b4,18,4
  1- 19 mp c4/c12
  1- 20 ld c12/b4,27,4
  1- 21 mp c5/c13
  1- 22 ld c13/b4,36,4
  1- 23 mp c6/c14
  1- 24 ld c14/b4,45,4
  1- 25 mp c7/c15
  1- 26 ld c15/b4,54,4
  1- 27 mp c8/c16
  1- 28 ld c16/b4,63,4
 dropou
TYPE COMMAND
type dropcu
 dropou
  1-  0 au high school dropout

  1-  1 ep
  1-  2 sb 1/c29
  1-  3 ld 345/c9
  1-  4 ld b0,0,(c29)/c9
  1-  5 br dro/c9,e,345
  1-  6 ld c9/c10
  1-  7 ld c9/c11
  1-  8 ld c9/c12
  1-  9 ld c9/c13
  1- 10 ld c9/c14
  1- 11 ld c9/c15
  1- 12 ld c9/c16
  1- 13 mp c1/c9
  1- 14 ld c9/b5,0,4
  1- 15 mp c2/c10
  1- 16 ld c10/b5,9 ,4
  1- 17 mp c3/c11
  1- 18 ld c11/b5,18,4
  1- 19 mp c4/c12
  1- 20 ld c12/b5,27,4
  1- 21 mp c5/c13
  1- 22 ld c13/b5,36,4
  1- 23 mp c6/c14
  1- 24 ld c14/b5,45,4
  1- 25 mp c7/c15
  1- 26 ld c15/b5,54,4
  1- 27 mp c8/c16
  1- 28 ld c16/b5,63,4
  1- 29 ty
  1- 30
  1- 31 ty              service  bus.  recreation  outdoors  tech.
  1- 32    education  science  bus. contac

  1- 33 ty

  1- 34 ty college
  1- 35 ty b1
  1- 36

  1- 37 ty Jr. college
  1- 38 ty b2
  1- 39

  1- 40 ty vocation school
  1- 41 ty b3
  1- 42

  1- 43 ty high school
  1- 44 ty b4
  1- 45

  1- 46 ty high school dropout
  1- 47 ty b5
  1- 48

  1- 49

 err
TYPE COMMAND
type err
 err
   0-  1 ea
   0-  2 ty You did not type in a number. Please type in a number from 1 to 10.

   0-  3 br ax2
 bus
TYPE COMMAND
type bus
 bus
   0-  1 ea
   0-  2 ty You did not type in a number. Please type in a number from 1 to 10.

   0-  3 br busine
 rec
TYPE COMMAND
type rec
 rec
   0-  1 ea
   0-  2 ty You did not type in a number. Please type in a number from 1 to 10.
```

```
      0-  2 ty You di d not type i n a number . Please type i n a number  fr om 1 to 10.

          3 br recrea
   out
 TYPE COMMAND
 type out
   out
     0-  1 ea
     0-  2 ty You di d not i n a number . lease type i n a number  fr om 1 to 10.
     0-  3 br outdoo
   tec
 TYPE COMMAND
 type tec
   tec
     0-  1 ea
     0-  2 ty You di d not type i n a number . Please type i n a number  fr om 1 to 10.

     0-  3 br techni
   edu
 TYPE COMMAND
 type edu
   edu
     0-  1 ea
     0-  2 ty You di d not type i n a number . Please type i n a number  fr om 1 to 10.

     0-  3 br educat
   sci
 TYPE COMMAND
 type sci
   sci
     0-  1 ea
     0-  2 ty You di d not type i n a number . Please type i n a number  fr om 1 to 10.
     0-  3 br sci enc
   buc
 TYPE COMMAND
 type buc
   buc
     0-  1 ea
     0-  2 ty You di d not type i n a number . Please type i n a number  fr om 1 to 10.

     0-  3 br buscon
   col
 TYPE OMMAND
 type col
   col
     0-  1 ea
     0-  2 ty You di d not type i n a number . Please type i n a number  fr om 1 to 10.

     0-  3 br colleg
   jrc
```

```
  jrc
TYPE COMMAND
type jrc
  jrc
    0-  1 ea
    0-  2 ty You did not type in a number . Please type in a number  from 1 to 10.

    0-  3 br  jrcoll
  voc
TYPE COMMAND
type voc
  voc
    0-  1 ea
    0-  2 ty You did not type in a number . Please type in a number  from 1 to 10.
```

```
00010 DIM A(50), B(50), C(20,20)
00020 A$(1)='SERVICE'
00030 A$(2)='EDUCATION'
00040 A$(3)='BUSINESS CONTACT'
00050 A$(4)='RECREATION'
00060 A$(5)='BUSINESS DETAIL'
00070 A$(6)='TECHNOLOGY'
00080 A$(7)='OUTDOORS'
00090 A$(8)='SCIENCE'
00100 FOR W=1TO8
00110 PRINT A$(W)
00120 INPUT A(W)
00130 IFA(W)>10THEN160
00140 IFA(W)<1THEN180
00150 GOTO200
00160 PRINT 'YOU USED A RATING GREATER THAN 10.  PLEASE USE NUMBERS BETWEEN 1 AND 10.'
00170 GOTO120
00180 PRINT 'YOU USED A RATING LESS THAN 1.  PLEASE USE A NUMBER BETWEEN 1 AND 10.'
00190 GOTO120
00200 NEXT W
00210 B$(1)='FOUR YEAR COLLEGE'
00220 B$(2)='TWO YEAR OR JUNIOR COLLEGE'
00230 B$(3)='TECHNICAL OR VOCATIONAL SCHOOL'
00240 B$(4)='COMPLETE HIGH SCHOOL EDUCATION'
00250 B$(5)='LESS THAN FULL HIGH SCHOOL EDUCATION'
00260 FORX=1TO5
00270 PRINT B$(X)
00280 INPUT B(X)
00290 IFB(X)>5THEN320
00300 IFB(X)<1THEN340
00310 GOTO360
00320 PRINT 'THE RATING YOU USED WAS GREATER THAN 5.  PLEASE USED NUMBERS BETWEEN 5 AND 1.'
00330 GOTO280
00340 PRINT 'THE RATING YOU USED WAS LESS THAN 1.  PLEASE USE NUMBERS BETWEEN 5 AND 1.'
00350 GOTO280
00360 NEXT X
00370 FOR K=1TO8
00380 FOR L=1TO5
00390 C(K,L)=A(K)*B(L)
00400 NEXT L
00410 NEXT K
00420 PRINT
00430 PRINT ,,'FOUR YR. COLLEGE','JR. COLLEGE','VOCATIONAL SCHOOL','HIGH SCHOOL','DROPOUT'
00440 FOR K=1TO8
00450 PRINTA$(K),,C(K,1),C(K,2),C(K,3),C(K,4),C(K,5)
00460 NEXT K
EDIT  end
READY edit ch3 basic
EDIT  list
```

```
00010 PRINT "TYPE IN THE 3 OCCUPATIONS THAT YOU HAVE DECIDED TO TEST."
00020 PRINT "YOU MUST ENCLOSE THEM WITHIN TWO APOSTROPHES."
00030 PRINT "EXAMPLE:  OCCUPATION  #1
00040 PRINT "            ? 'WAITRESS'"
00050 PRINT ".           OCCUPATION  #2"
00060 PRINT "            ? 'COOK'"
00070 PRINT "PRESS RETURN THEN EOT AFTER ACH ENTRY."
00080 PRINT REMEMBER TO DO THIS AFTER EVERY ENTRY IN THE WHOLE PROGRAM."
00090 PRINT
00100 DIM Z$(5)
00110 FOR Q=1TO3
00120 PRINT 'OCCUPATION #'Q
00130 INPUT Z$(Q)
00140 NEXT Q
00150 PRINT
00160 DIM D(20), E(20,20), F(20,20), A$(20), B(20)
00170 PRINT "NOW YOU MUST ENTER IN THE VALUES THAT YOU HAVE SELECTED."
00180 PRINT "THEY MUST ALSO BE ENCLOSED BY APOSTROPHES."
00190 PRINT "ENTER IN NO MORE THAN 4 VALUES FOR EACH SUBHEADING."
00200 PRINT "ENTER ONLY ONE VALUE FOR EACH QUESTION MARK."
00210 RINT "UNDER YOUR LAST VALUE IN EACH GROUP, TYPE 'DONE'."
00220 PRINT "EXAMPLE:  PHYSICAL VALUES"
00230 PRINT "             ? 'SALARY'"
00240 PRINT "             ? 'CLEANLINESS'"
00250 PRINT "             ? 'DONE'"
00260 PRINT 'REMEMBER O PRESS RETURN AND EOT AFTER ACH ENTRY.'
00270 PRINT
00280 PRINT 'PHYSICAL VALUES'
00290 OR X=1TO5
00300 INPUT A$(X)
00310 IFA$(X)='DONE'THEN330
00320 NEXT X
00330 PRINT 'EMOTIONAL VALUES'
00340 FOR  X=6TO10
00350 INPUT A$(X)
00360 IFA$(X)='DONE'THEN380
00370 NEXT X
00380 PRINT 'INTELLECTUAL VALUES'
00390 FOR X=11TO15
00400 INPUT A$(X)
00410 IFA$(X)='DONE'THEN430
00420 NEXT X
00430 PRINT
00440 PRINT "NOW WEIGHTS MUST BE ASSIGNED TO EACH VALUE."
00450 PRINT "ASSIGN WEIGHTS ACCORDING TO HOW MUCH IMPORTANCE YOU GIVE TO EACH VALUE."
00460 PRINT "LET 10 BE OF THE HIGHEST IMPORTANCE AND 1 OF THE LOWEST."
00470 PRINT "USE NUMERALS AND DO NOT ENCLOSE THEM IN APOSTROPHES."
```

```
00440 PRINT "NOW WEIGHTS MUST BE ASSIGNED TO EACH VALUE."   IMPORTANCE YOU GIVE TO EACH VAL   ."
00450 PRINT "ASSIGN WEIGHTS ACCORDING T  HOW MUCH IMPORTANCE AND 1 OF THE LOWEST." .
00460 PRINT "LET 10 BE OF THE HIGHEST IMPORTANCE AND 1 OF THE LOWEST."
00470 PRINT "USE NUMERALS AND DO NOT ENCLOSE THEM IN APOSTROPHES."
00480 PRINT "EXAMPLE:  SALARY"
00490 PRINT "             ? 10"
00500 PRINT "             CLEANLINESS"
00510 PRINT "             ? 5"
00520 PRINT 'PRESS RETURN THEN EOT AFTER EACH ENTRY.'
00530 PRINT
00540 FOR =1TO5
00550 IFA$(K)='DONE'THEN560
00560 PRINT $(K)
00570 INPUT D(K)
00580 IFD(K)>10THEN610
00590 IFD(K)<1THEN630
00600 GOTO650
00610 PRINT 'YOUR WEIGHT WAS GREATER THAN 10. PLEASE TYPE IN A NUMBER FROM 1 TO 10'
00620 GOTO570
00630 PRINT 'YOUR WEIGHT WAS LESS THAN 1. PLEASE TYPE IN A NUMBER FROM 1 TO 10.'
00640 GOTO570
00650 NEXT K
00660 FOR K=6TO10
00670 IFA$(K)='DONE'THEN780
00680 PRINT A$(K)
00690 INPUT D(K)
00700 IFD(K)>10THEN730
00710 IFD(K)<1THEN750
00720 GOTO770
00730 PRINT 'YOUR WEIGHT WAS GREATER THAN 10. PLEASE TYPE IN A NUMBER FROM 1 TO 10.'
00740 OTO690
00750 RINT 'YOUR WEIGHT WAS LESS THAN 1. PLEASE TYPE IN A NUMBER ROM 1 TO 10.'
00760 GOTO690
00770 NEXT K
00780 FOR K=11TO15
00790 IFA$(K)='DONE'THEN900
00800 PRINT A$(K)
00810 INPUT D(K)
00820 IFD(K)>10THEN850
00830 IFD(K)<1THEN870
00840 GOTO890
00850 PRINT 'YOUR WEIGHT WAS GREATER THAN 10. PLEASE TYPE IN A NUMBER FROM 1 TO 10.'
00860 GOTO810
00870 PRINT 'YOUR WEIGHT WAS LESS THAN 1. PLEASE TYPE IN A NUMBER FROM 1 TO 10.'
00880 GOTO810
00890 NEXT K
00900 PRINT
00910 PRINT "USE 5, 4, 3, 2, OR 1 AS YOUR FAVORABILITY RATINGS."
00920 PRINT "TYPE IN ONE OF THEM FOLLOWING EACH JOB GIVEN."
00930 PRINT "USE NUMERALS AND DO OT ENCLOSE THEM IN APOSTROPHES."
```

```
01120 PRINT "YOUR FAVORABILITY RATING WAS GREATER THAN 5. PLEASE TYPE IN A NUMBER FROM 1 TO 5."
01130 GOTO1080
01140 PRINT "YOUR FAVORABILITY RATING WAS LESS THAN 1. PLEASE TYPE IN A NUMBER FROM 1 TO 5."
01150 GOTO1080
01160 NEXT J
01170 PRINT
01180 NEXT I
01190 FOR I=6TO10
01200 IFA$(I)='DONE'THEN1350
01210 PRINT A$(I)
01220 FOR J=1TO3
01230 PRINT Z$(J)
01240 INPUT E(I,J)
01250 IFE(I,J)>5THEN1280
01260 IFE(I,J)<1THEN1300
01270 GOTO1320
01280 PRINT "YOUR FAVORABILITY RATING WAS GREATER THAN 5. PLEASE TYPE IN A NUMBER FROM 1 TO 5."
01290 GOTO1240
01300 PRINT "YOUR FAVORABILITY RATING WAS LESS THAN 1. PLEASE TYPE IN A NUMBER FROM 1 TO 5."
01310 GOTO1240
01320 NEXT J
01330 PRINT
01340 NEXT I
01350 FOR I=11TO15
01360 IFA$(I)='DONE'THEN1510
01370 PRINT A$(I)
01380 FOR J=1TO3
01390 PRINT Z$(J)
01400 INPUT E(I,J)
01410 IFE(I,J)>5THEN1440
01420 IFE(I,J)<1THEN1460
01430 GOTO1480
01440 PRINT "YOUR FAVORABILITY RATING WAS GREATER THAN 5. PLEASE TYPE IN A NUMBER FROM 1 TO 5."
01450 GOTO1400
01460 PRINT "YOUR FAVORABILITY RATING WAS LESS THAN 1. PLEASE TYPE IN A NUMBER FROM 1 TO 5."
01470 GOTO1400
01480 NEXT J
01490 PRINT
01500 NEXT I
01510 FOR I=1TO12
01520 FOR J=1TO3
01530 F(I,J)=E(I,J)*D(I)
01540 NEXT J
01550 NEXT I
01560 PRINT
01570 PRINT   ;'VALUES','WEIGHTS',,Z$(1),Z$(2),Z$(3)
01580 PRINT
015[illegible] PRINT   ;'PHYSICAL'
016[illegible] PRINT
01610 FOR I-1TO5
```

```
[illegible] THEN1720
01700 PRINT I ;A$(I),D(I),,F(I,1),F(I,2) F(I,3)
01710 NEXT I
01720 PRINT
01730 PRINT    ;'INTELLECTUAL'
01740 PRINT
01750 FOR I=11TO15
01760 IFA$(I)='DONE'THEN1790
01770 PRINT I ;A$(I),D(I),,F(I,1),F(I,2),F(I,3)
01780 NEXT I
01790 PRINT
01800 Q=0
01810 W=0
01820 =0
01830 R=0
01840 FOR I=1TO12
01850 Q=Q+D(I)
01860 W=W+F(I,1)
01870 E=E+F(I,2)
01880 R=R+F(I,3)
01890 NEXT I
01900 PRINT
01910 PRINT    ;'TOTALS',Q,,W,E,R
01920 T=5*Q
01930 PRINT
01940 PRINT
01950 PRINT 'YOUR IDEAL SCORE IS: 'T
01960 Y=W/T*100
01970 U=E/T*100
01980 O=R/T*100
01990 PRINT
02000 PRINT "IF ONE OF YOUR SCORES IS OVER 66%OF YOUR IDEAL SCORE,"
02010 PRINT "THEN THAT OCCUPATION MAY SUIT YOU."
02020 PRINT "IF NOT YOU CAN CHANGE SOME OF WEIGHTS AND FAVORABILITY RATINGS."
02030 PRINT
02040 PRINT 'THE PERCENTS ARE:',Z$(1);Y'%',Z$(2);U'%',Z$(3);O'%'
02050 PRINT
02060 PRINT "IF YOU WOULD LIKE TO CHANGE A WEIGHT, TYPE 'YES', IF NOT TYPE 'NO'."
02070 INPUT B$
02080 IFB$='YES'THEN2100
02090 IFB$='NO'THEN2140
02100 PRINT 'TYPE THE NUMBER BESIDE THE VALUE YOU WANT TO CHANGE, NOT THE WEIGHT'
02110 INPUT M
02120 PRINT 'NOW TYPE IN THE NEW WEIGHT.'
02130 INPUT D(M)
02140 PRINT "IF YOU WOULD LIKE TO CHANGE A FAVORABILITY RATING,"
02150 PRINT "TYPE 'YES', IF NOT TYPE 'NO'."
02170 INPUT P$
021[illegible] IFP$='YES'THEN2200
02190 IFP$='NO'THEN2250
02200 PRI
```

```
[illegible] PRINT
02040 PRINT 'THE PERCENTS ARE:',Z$(1);Y'%' Z$(2);U'%',Z$(3);O'%'
 2050 PRINT
02060 PRINT "IF YOU WOULD LIKE TO CHANGE A WEIGHT, TYPE 'YES', IF NOT TYPE 'NO'."
02070 INPUT B$
02080 IFB$='YES'THEN2100
02090 IFB$='NO'THEN2140
02100 PRINT 'TYPE THE NUMBER BESIDE THE VALUE YOU WANT TO CHANGE, NOT THE WEIGHT'
02110 INPUT M
02120 PRINT 'NOW TYPE IN THE NEW WEIGHT.'
02130 INPUT D(M)
02140 PRINT "IF YOU WOULD LIKE TO CHANGE A FAVORABILITY RATING,"
02150 PRINT "TYPE 'YES', IF NOT TYPE 'NO'."
02170 INPUT P$
02180 IFP$='YES'THEN2200
02190 IFP$='NO'THEN2250
02200 PRINT 'TYPE IN THE VALUE NUMBER AND THE OCCUPATION NUMBER.'
02210 INPUT M,N
02220 PRINT 'NOW TYPE IN THE FAVORABILITY RATING.'
02230 INPUT E(M,N)
02240 IFP$='YES'THEN2260
02250 FB$='NO'THEN2270
02260 GOTO1510
02270 END
```

```
READY [illegible]
EDIT [illegible]st
00010 PRINT 'THIS PROGRAM IS DESIGNED TO TEACH YOU HOW TO USE THE TERMINAL. "ERE'
00020 PRINT 'ARE A FEW BASIC RULES TO REMEMBER WHENEVER YOU USE THE TERMINAL.'
00030 PRINT "1.  ALWAYS PRESS HE 'BID' KEY BEFORE TYPING ANYTHING ON THE COMPUTER."
00040 PRINT "THIS KEY UNLOCKS THE EYBOARD."
00050 PRINT"2.  WHEN OU ARE FINISHED TYPING A STATEMENT OR INFORMATION, PRESS THE"
00060 PRINT "'RETURN'KEY AND THEN THE 'EOT' KEY."
00070 PRINT "3.  YOU MAY BACKSPACE ON THIS TERMINAL, BUT ANYTHING YOU BACKSPACE OVER"
00080 PRINT "WILL BE ERASED IN THE COMPUTER, AND YOU MUST RETYPE IT. AN EXAMPLE OF"
00090 PRINT "THIS WOULD BE IF YOU UT AN 'N' IN THE PLACE OF THE 'M' IN THE WORD 'COM-"
00100 PRINT "PUTER', AND DID NOT DISCOVER YOUR MISTAKE UNTIL YOU HAD FINISHED TYPING"
00110 PRINT "THE WORD.  YOU COULD BACKSPACE TO THE 'N' AND CORRECT YOUR MISTAKE, BUT"
00120 PRINT "YOU WOULD ALSO HAVE TO TYPE THE P-U-T-E-R THAT FOLLOWS IT."
00130 PRINT
00140 PRINT "'LOGGING ON AND OFF'"
00150 PRINT "TO LOGOFF, YOU MUST FIRST GET OUT OF THE PROGRAM YOU"
00160 PRINT HAVE BEEN WORKING IN'. TO DO THIS YOU MUST TYPE THE WORD 'END' AFTER"
00170 PRINT "THE 'EDIT' THAT WILL APPEAR. AFTER THIS THE WORD 'READY' WILL APPEAR."
00180 PRINT "NOW TYPE  'LOGOFF'."
00190 PRINT "TO GET ON THE COMPUTER YOU FIRST HAVE TO TYPE 'LOGON',"
00200 PRINT "THEN THE LIBRARY NUMBER YOU ARE USING."
00210 PRINT "WHEN YOU RECEIVE A 'READY', TYPE 'EDIT', THE NAME OF THE PROGRAM, AND 'BASIC'."
00220 PRINT "THE COMPUTER WILL THEN GIVE YOU AN 'EDIT'. YOU ARE NOW READY TO GO INTO YOUR PROGRA
00230 PRINT
00240 PRINT "TO GO THROUGH A PROGRAM, TYPE RUN AFTER THE 'EDIT'."
00250 PRINT "IF AFTER YOU HAVE JUST LOGGED ON AND TYPED RUN AND RECEIVED A STATEMENT SAYING"
00260 PRINT "'COLL EMPTY', THIS MEANS THAT THE PROGRAM IS NO LONGER ON FILE."
00270 PRINT
00280 PRINT
00290 PRINT "WHENEVER YOU ARE ASKED TO ENTER DATA YOU WILL RECEIVE A QUESTION MARK."
00300 PRINT "TYPE IN THE INFORMATION ASKED FOR AFTER IT."
00310 PRINT
00320 PRINT WHEN ENTERING NUMBERS,JUST TYPE THE NUMBER. NOTICE THAT THE TERMINAL HAS A'1',"
00330 PRINT "DO NOT USE A SMALL 'L' FOR A 1, OR A 'O' FOR A'0'."
00340 PRINT "FOR NEGATIVE NUMBERS, USE THE LOWER CASE DASH'-'."
00350 PRINT
00360 PRINT "ENTERING WORDS IS DIFFERENT THEN ENTERING NUMBERS. WHEN YOU ENTER A WORD"
00370 PRINT "YOU MUST ALWAYS ENCLOSE THEM IN APOSTROPHIES.  EXAMPLE:  'YES', 'JOHN DOE'"
00380 PRINT
00390 PRINT "ONLY TYPE IN THE TYPE OF DATA REQUESTED. IF YOU DON'T, THE COMPUTER WILL STOP "
00400 RINT "EXECUTION OF THE PROGRAM AND GIVE YOU AN 'EDIT'."
00410 PRINT "FOR PRACTICE ENTER IN YOUR FULL NAME."
00420 INPUT A$
00430 PRINT "NOW ENTER YOUR AGE THIS YEAR."
00440 INPUT A
00450 B=1973-A
00460 RINT A$ ' WAS BORN IN 'B
```

```
00390 PRINT "ONLY TYPE IN THE TYPE OF DATA REQUESTED. IF YOU DON'T, THE COMPUTER WILL STOP"
00400 RINT "EXECUTION OF THE PROGRAM AND GIVE YOU AN 'EDIT'."
00410 PRINT "FOR PRACTICE ENTER IN YOUR FULL NAME."
00420 INPUT A$
00430 PRINT "NOW ENTER YOUR AGE THIS YEAR."
00440 INPUT A
00450 B=1973-A
00460 RINT A$ ' WAS BORN IN 'B
EDIT  end
READY logoff
LOGGED OFF AT  13.34.00    73.165
#SESSION URATION  00.21.40  CPU TIME USED      80/300THS SEC.
```

```
 aCDM/CDM
06/14/73   13:35   line   1
YOUR NAME IS CDM TEAM
BLOCKS =   70  TIME =   18:34
```

HUMAN

# of training sessions conducted	-Latino Guidance Program-Interpersonal Skills Training & Program Dev. Skills -School building engineers - 30 - IPS Discrimination Skills Training -Family Skills Training - Church - 20 - IPS Training -Religious Ed. Teachers Program - 20 - IPS Training -Adult Religious Ed. - 20 - IPS Training -Delivered Interpersonal Skills to about 180 7th grade students to the level appropriate for their situation.
# of people trained	-60
# of people given consultant help	-Have worked with my principal all year in developing his own human skills. he has suggested in-service for the entire staff. -Have used the skills in my dealing with parents on at least 20 occasions. -principals - 7 -students - 200 -friends and outside the district - 10 -university - 9
# of requests for information by phone	3
# of requests for information by mail	15
# of presentations requests	
# of people presented to	
# of conferences attended	
# of programs developed or revised	-Developed 3 new human programs.

APPENDIX T
ANECDOTAL INFORMATION

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HUMAN (CONT.)

personal

-I became more aware of moving to the action stage in counseling, rather than just listening and advision.

-My enthusiasm grew and different professionals questioned me about the Carkhuff HRD Model, such as school nurse, teacher-consultant, psychologist, social worker, etc. and other administrators.

-I feel better prepared and more aware of my observing, listening, attending and responding skills when communicating with every human being-my aged mother, my husband, my daughter, etc. and I know I am interpreting a more exact feeling.

-I feel a greater respect and a deeper importance placed upon my opinions, feelings and decisions on the part of my husband. He really listens to what I have to say in a matter that makes me feel that I know whereof I speak.

-My role in my church grew as I took stands and had the confidence to be me.

-5-minute speech in the worship service to promote our annual Pledge drive - raising money for budget.

-Represented the middle-aged faction of our membership on the Contemporary Worship Committee - supported, planned and presented a Contemporary Worship experience which was well received.

-Became an active member of the Worship Committee.

-Gave a presentation at the Christmas program for our United Methodist Women.

-I realized the value of confrontation with individuals was a necessary part of resolving a problem in some cases.

-For the first time in my life I feel a part of a philosophy which brings out the best in me and helps me to grow each day as a complete individual, physically, intellectually, and emotionally.

EDUCATION

#of training sessions conducted	-Taught 7-8 people from Bloomfield Hills program development skills to help them in designing new programs. -Delivered workshop in program development ot Pontiac Administrators (50) ? at beginning of school year. -Trained 6 Madison teachers Educational delivery skills. -Inservices for teachers - 150
# of people trained	-500
#of people given consultant help	-Consulted with over 200 visitors, 10 projects including: university professors, principals, evaluators, counselors, teachers -Assisted 3 teachers in writing educational programs. -Assisted each of 10 trainers on average of 5 times in developing programs -Administrators requested and respected my opinions on important matters, and acted upon my recommendations. -Staff members sought my assistance in writing P.O.s in "73-74. -I feel I am a better discriminator of what good teaching really is - experiencing the ROPES method and using the evaluation scale. -The decision-making model became real to me as I explained the process to different people who could use it in making important life decisions. (My daughter in choosing a graduate school). -I have kept my principal aware of the Educational delivery skills. He began to apply them to a design for substitute lesson plans for all teachers. -Assisted new teacher in designing lessons at skill level.
# of requests for information by phone	3 -Call from Mason for more information on Learning Center.
# of requests for information by mail	5
# of presentation requests	-Asked to present 3 times before school district management team. -Secured adoptation of HRD Development System Model by school district. -100% increase in efficiency in planning meetings. -Used the Leader to Detractor Scale in our learning center and explained this scale to parents to describe their child's behavior.
# of people presented to	
# of conferences attended	-Conferences - Attended an average of 3 per year.

EDUCATION (CON'T.)

# of programs developed or revised	-Physical programs developed and implemented: self-2 others-10 -Co-designed and co-directed Learning Center at Madison based on Carkhuff Living, Learning and Working Model. Increased both quantity and quality of services to Madison students of varying skill levels
	-Developed materials and directed curriculum design meeting for Wilson-Madison -Reading and language arts planning session for 1974-75/to design program which incorporates 6th and 7th grade students. -New programs development - 10 -Old programs development - 7
personal	-Began Doctoral Program. -Nominated for Outstanding Young Woman of the Year. -Took 30 hours of Post Graduate Credit -Professional Comm. Membership Inc. 100% -Professional Organizations - inc. membership 100% - av. membership - 4 org. -I have realized that the systematic approach to any phase of growth or living is the best way to work. Attendance at professional mts. 100% - Av. 5
writing	-Published - 2 newspaper articles, 1 journal article

CAREER

# of training sessions conducted	10
# of people trained	190
# of people given consultant help	-principals - 25 -parents - 13 -friends - 10 -university people - 12 -teachers - 150
# of requests for info. by phone	143
# of requests for info. by mail	120
# of presentation requests	87
# of people presented to	342
# of conferences attended	-MEA conference on racism described CAREER program to co-ordinator and assistants particular application to women and blacks. -Attended APGA pre-convention workshop - delivered Human and Career skills to 14 people directly and 400 people indirectly. -Attended APGA convention.
# of programs developed or revised	-An existing program (MAP) became a piece of the learning center designed to meet needs of 15 talented kids. Changed from attitude based program to skill based program.
	- Designed whole program based on CAST skills.
personal	-Encouraged me to deliver the career skills in a program called M.A.P. (Madison Awareness Program). -Investigating the possibility of installing a version of CAST as part of the 6th grade curriculum for next year. -Received ASCA National Research Award for '73-'74 for part in research on CAST -Presented Career Skills program to MSU class in curriculum - 15 people - graduate class.
writing	

APPENDIX U

EXTERNAL EVALUATION REPORT

EDUCATIONAL SERVICES AND PRODUCTS, INC.
5111 Colony Woods Drive
Kalamazoo, Michigan 49009

Interim Evaluation Report 1
October, 1973

HUMAN AND COMPUTER ASSISTED GUIDANCE PROGRAM
The School District of the City of Pontiac, Michigan

Submitted By:

Theodore L. Ploughman, Ph.D.
Evaluation Consultant

Interim Evaluation Report 1 Oct. 1973

Project: Human and Computer Assisted Guidance (CAST) Program
Agency: The School District of the City of Pontiac, Michigan

EVALUATION REPORT

Evaluation Contract

The contract for external evaluation services was let to Educational Services and Products, Inc. for the period beginning July 1, 1973 through June 30, 1974. Evaluation services will be provided principally by Theodore L. Ploughman, Ph.D.. Services and/or materials to be provided are as follows:

(1) Review student skill objectives by grade level.
(2) Review and critique evaluation design.
(3) Recommend evaluation design changes, if necessary.
(4) Review, critique and assist in developing all evaluation instruments and data analysis procedures.
(5) Monitor evaluation activities.

The evaluation effort is structured to include a high level of cooperation between the CAST Program Director, the Pontiac Schools R&D Department, and the external evaluator. A minimum of twelve (12) on-site consultations between these three participants are scheduled.

Interim Report Period

This report covers the period between July 1, 1973 through October 30, 1973. Four (4) site-visits were made by the external evaluation consultant during this period.

Phase III Plan, Methods and Evaluation

Major consultant services during the period covered by this report were directed towards the development of the Phase III plan, specifically the Methods and Evaluation section. The Plan progressed from an early conceptual design to the pbulished document dated July, 1973.

Six Project Level Objectives were formalized to include the essential elements: (1) Objective statement, (2) Method(s) to reach the objective, (3) Method(s) to evaluate the objectives, and (4) Data analysis design.

These six Project Level Objectives and their evaluation design are the focus for evaluation discussions between the Project Director, R&D staff, and the external evaluator. Each site visit addresses each of the objectives in terms of progress of the evaluation effort.

Progress

Each of the six Project Level Objectives will be reviewed according to discussions and actions prior to October 1, 1973.

Objective One - ONE HUNDRED TWENTY FIVE ELEMENTARY, 700 JUNIOR HIGH AND 200 HIGH SCHOOL STUDENTS WILL DEMONSTRATE KNOWLEDGE OF CAREER ACHIEVEMENT SKILLS NECESSARY FOR CAREER PLACEMENT DURING THE 1973-74 SCHOOL YEAR.

A. Methods used to Reach the Objective (Completed to date)

1. Select 30-40 elementary and secondary participants for the 1973-74 school year.
2. Train 73-74 trainees and retrain 72-73 participants in the Human, Educational, and Career skills necessary to deliver the CAST program.

Discussion - Overall student learning objectives are skill and understanding in: (1) Expanding jobs, (2) Decision-making, and (3) Career planning. The evaluation effort must include an assessment of these culminating objectives at the end of the Phase III period. An example of evidence of skill and understanding would be one student teaching another how to make a career choice decision. The question raised with respect to this particular example was - Must the program then include teaching students how to teach? Further discussion of this evaluation component is required.

Teachers are scoring all student tests. Pontiac R&D staff will compile, analyze, and report results. Assistance will be provided by the external evaluator. Concern for a proper test protocal for teacher administration of tests has been addressed by providing guidelines to the teachers. The external evaluator anticipates making observations of test administration.

The "Career Achievement Skills Training - Teachers Manual" will be updated or revised during Phase III. No evaluation critique is anticipated for the Manual. Concern was expressed that some critique was necessary to inform review agencies of strengths and weaknesses discovered during use.

Subjective judgements will be made of item worth for student test items. Item scores will be correlated with overall performance ratings. R&D will attempt to create an instrument to test level of performance on a culminating "total" skill. This instrument to measure goal achievement will be treated as an independent variable for comparisons with individual performance objective test results treated as dependent variables.

Objective Two - THE 1973-74 TRAINEES WILL DEMONSTRATE KNOWLEDGE OF INTERPERSONAL SKILLS, EDUCATIONAL SKILLS AND CAREER SKILLS NECESSARY TO DELIVER THE CAST PROGRAM DURING THE 1973-74 SCHOOL YEAR.

A. Methods used to Reach the Objective (Completed to date)

1. Select 25-30 1973-74 trainees.
2. Train 73-74 trainees in Human, Educational and Career Skills necessary to deliver the Cast program.
3. Establish CAST goals for trainees.

Discussion - The pre-test of teachers entering the training workshops was biased to some unknown degree by exposure to workshop materials prior to testing. An alternative "pre-test" was considered. The selection of teachers as trainees included responses by teachers to an instrument very similar to the pre-test. Use of the selection instrument for pre-post comparisons is being considered.

The teacher trainee pre-post test data permits a correlation study between training performance and classroom teaching performance. No formal analysis and subsequent Project report is anticipated. The results of this analysis, if made, will serve for internal Project response.

The external evaluator encouraged the Project Director and R&D staff to formulate Research Objectives consistent with the several unique processes being developed within the project.

Objective Three - THE 1972-73 TRAINEES WILL DEMONSTRATE KNOWLEDGE OF EDUCATIONAL SKILLS USED FOR DELIVERY OF THE MODEL LESSON PLAN FORMATS TO STUDENTS DURING THE SCHOOL YEAR.

Discussion - No discussion to report

Objective Four - THREE ELEMENTARY COUNSELORS, ONE JUNIOR HIGH COUNSELOR, ONE JUNIOR HIGH TEACHER, TWO SENIOR HIGH COUNSELORS AND TWO SENIOR HIGH ADMINISTRATORS WILL CONDUCT TRAINING AND FOLLOW-UP SESSIONS IN INTERPERSONAL SKILLS, EDUCATIONAL SKILLS AND CAREER SKILLS TO NEW CAST PARTICIPANTS DURING THE SUMMER AND THE 1973-74 SCHOOL YEAR.

A. Methods used to Reach the Objective (Completed to date)
  1. Train local trainers using representatives from Carkhuff Assoc.
  2. Establish training goals for trainers.
  3. Evaluate all training delivery.

Discussion - Discussion raised the potential value of correlating Trainer level of functioning with Trainee performance. Further consideration of such an analysis is anticipated.

Objectives Five and Six - No discussion to report at this time.

Summary Comments

The contractual arrangements establishing essentially an evaluation task force composed of Project Director, Local R&D Experts, and an external evaluator promises both a comprehensive and meaningful evaluation effort. Local staff maintain that close relationship which enhances understanding and clarity of purpose. The external evaluator assures objectivity. The arrangement itself will be worthy of evaluation at the termination of the Project.

EDUCATIONAL SERVICES AND PRODUCTS, INC.
5111 Colony Woods Drive
Kalamazoo, Michigan 49009

Interim Evaluation Report 2

February, 1974

HUMAN AND COMPUTER ASSISTED GUIDANCE PROGRAM

The School District of the City of Pontiac, Michigan

Submitted By:

Theodore L. Ploughman, Ph.D.
Evaluation Consultant

Interim Evaluation Report 2 Feb. 1974

Project: Human and Computer Assisted Guidance (CAST) Program
Agency: The School District of the City of Pontiac, Michigan

EVALUATION REPORT

Evaluation Contract

Evaluation services provided by Theodore L. Ploughman, Ph.D., of Educational Services and Products, Inc. are related to the following areas:

(1) Review student skill objectives by grade level.
(2) Review and critique evaluation design.
(3) Recommend evaluation design changes, if necessary.
(4) Review, critique and assist in developing all evaluation instruments and data analysis procedures.
(5) Monitor evaluation activities.

Interim Report Period

This report covers the period between November 1, 1973 through February 19, 1974. Three (3) site visits were made by the external evaluator during this period.

Phase III Project Level Objectives Review

Interim Report 1 reviewed the status of each of the six Project Level Objectives as of October 1, 1973. This report reviews their status as of February 19, 1974. Only those steps receiving action between October 1, 1973 and February 19, 1974 will be discussed. The Methods used to reach the Objectives presented below are either completed or in process.

Objective One - ONE HUNDRED TWENTY FIVE ELEMENTARY, 700 JUNIOR HIGH AND 200 HIGH SCHOOL STUDENTS WILL DEMONSTRATE KNOWLEDGE OF CAREER ACHIEVEMENT SKILLS NECESSARY FOR CAREER PLACEMENT DURING THE 1973-74 SCHOOL YEAR.

A. Methods used to reach the Objective.

1. Select 30-40 elementary and secondary participants for the 1973-74 school year.
2. Train 73-74 trainees and retrain 72-73 participants in the Human, Educational, and Career skills necessary to deliver the CAST program.
3. Followup delivery of CAST model lesson plans.
4. Evaluate model lesson plan development at the elementary, junior high and senior high levels.
5. Determine appropriate career-curriculum integration activities.
6. Secure reactions to CAST program from students, parents and administrators.
7. Evaluate student achievement of Career Achievement Skills.

Discussion

Method 3 - Each trainer has from one to three trainees to observe. Using the teacher Observational Checklist the trainers are observing an average of two trainees per week as they deliver CAST lesson plans.

The Project Director has developed a new "Teaching Skills Diagnostic Checklist" for teacher observation. R&D staff are developing an evaluation design for analysis of checklist responses.

The trainers are staff members who were in the CAST program last year and who received training as CAST trainers during Summer, 1973 in-service and are attending an on-going evening class under the auspices of Wayne State University. This class meets once per week, with an Agenda prepared by the Project Director, Judy Battenschlag. The external evaluator attended on abreviated session (due to weather conditions). Clear evidence was present of participant involvement and dedication to their CAST training.

Method 4 - The elementary and junior high lesson plans are presently being re-written by a task group composed of CAST trainers. A checklist of content attributes similar to the "Teaching Skills Diagnostic Checklist" is serving as a basis for content review. Subjective feedback from Lesson Plan (Teacher Manual) users and expert review forms the evaluation base leading to revision.

Method 5 - Project staff are making judgements as to which Career Skills can be effectively integrated into the typical school subject areas. Integration plans will be included as supplementary activities to the CAST Lesson Plans. They will be appended to the elementary and junior high curriculum guide.

Method 6 - The Project Director and the R&D consultant are in the process of creating a survey form for parents and one for students to obtain their feedback in response to the CAST program. The intention to obtain administrator feedback is presently not active. The parent survey will be included with other Pontiac School project surveys.

Method 7 - Individual student achievement in the CAST program is an on-going process as the students master instructional modules. The Project Director has permitted the teachers to reduce testing to assure completion of the Lesson Plans. The goal is to complete the total program by the second week of April.

Currently in process is the development of a post-test evaluation instrument to be administered to students for final evaluation of program impact. The instrument will sample various skills at the expanding and decision-making levels. The complex skills taught in CAST do not lend themselves easily to typical paper and pencil tests. Much effort has been expended individually and collectively by the Project Director, staff R&D consultants, and the external evaluation consultant to formalize an acceptable evaluation design and instrument.

First attempts to assess CAST program impact by tape recorded student responses to a set of career-oriented questions was not successful. Negligible differences in responses between control and experimental program students were detected. A critique of the interview items raised the possibility that they did not properly discriminate CAST objectives at a learning level sufficient to detect program impact. The external evaluation consultant interpreted the questions as essentially single concept questions which reasonably bright and articulate students could favorably respond to. Another attempt is warranted with questions which require integration of principles and multi-dimensional decision-making.

The Project Director and staff R&D consultants are in the process of determining if interviews with participating students would be an appropriate means to gather additional data of student impact. Data of interest includes student perceptions of CAST program value and the presence of additional learnings not expected or detected by papaer and pencil tests.

Objective Two - THE 1973-74 TRAINEES WILL DEMONSTRATE KNOWLEDGE OF INTERPERSONAL SKILLS, EDUCATIONAL SKILLS AND CAREER SKILLS NECESSARY TO DELIVER THE CAST PROGRAM DURING THE 1973-74 SCHOOL YEAR.

A. Methods used to reach the Objectives

1. Select 25-30 1973-74 trainees.
2. Train 73-74 trainees in Human, Educational and Career Skills necessary to deliver the CAST program.
3. Establish CAST goals for trainees.
4. Observe and followup trainees.
5. Develop elementary, junior high and high school model lesson plans.
6. Evaluate model lesson plan development at the elementary, junior and senior high levels.
7. Evaluate model lesson plan delivery at the elementary, junior high and senior high levels.
8. Determine career-curriculum integration activities.
9. Conduct additional training, if necessary.
10. Coordinate internships.

Discussion

Methods 4-8 - These methods are similar to or are contained in the Methods 3-5, Objective One. Discussion of these Methods follows Objective One.

Method 9 - Training has continued. It is in its final phase.

Method 10 - Some teachers have had students serving internships in local career related settings. Internships were not highly active during this report period.

All pre-tests given to trainees have been scored. Post-test scoring is not finished. Not all trainees were post-tested immediately after training.

Pontiac R&D staff anticipate observing both CAST trained and not trained teachers to determine if observation will detect the presence of skills addressed in training at a higher level for trained teachers. The question of observer bias because of knowledge about which teachers have been trained is recognized. Some attempt may be made to secure an unbiased observer, yet one trained in the skills of the CAST program.

Objective Three - THE 1972-73 TRAINEES WILL DEMONSTRATE KNOWLEDGE OF EDUCATIONAL SKILLS USED FOR DELIVERY OF THE MODEL LESSON PLAN FORMATS TO STUDENTS DURING THE SCHOOL YEAR.

Discussion

A few teachers (1972-73 trainees) are serving in a program support role. None of these 1972-73 trainees are really delivering the program. A primary task for them is refered to in Method 7. They are active in the effort to integrate CAST into subject matter areas. They will also assist in the coordination of internships.

These several teachers and one counselor are regular full-time employees in their schools. Their project related duties are assumed over and above regular school assignments. Ten trainers also serve over and above their regular school assignments.

Objective Four - TWO ELEMENTARY COUNSELORS, THREE JUNIOR HIGH COUNSELORS, ONE JUNIOR HIGH TEACHER, TWO SENIOR HIGH COUNSELORS, AND TWO ADMINISTRATORS WILL CONDUCT TRAINING AND FOLLOW-UP SESSIONS IN INTERPERSONAL SKILLS, EDUCATIONAL SKILLS AND CAREER SKILLS TO NEW CAST PARTICIPANTS DURING THE SUMMER AND THE 1973-74 SCHOOL YEAR.

A. Methods used to reach the objective

1. Train during August local trainers using representatives from Carkhuff Associates.
2. Establish training goals for trainers.
3. Evaluate all training delivery by these trainees to the 1973-74 trainees.
4. Evaluate trainer observations and followup of participant delivery of CAST program.
5. Coordinate model lesson plan development at elementary, junior high, and high school level.
6. Conduct feedback sessions concerning training, delivery and model lesson plan development, and career-curriculum integration activities.

Discussion

Method 3 - The trainers are evaluated on the same scale they use to evaluate new trainees. The trainers also respond to needs that arise during the weekly class meeting for trainers and trainees.

Method 4 - The Project Director is using observational data as one basis for re-writting the CAST curriculum.

Methods 5-6 - These activities were addressed earlier. Friday morning meetings each week with staff address the review of lesson plan development and curriculum integration activities.

Objective Five - THE COMPUTER WILL BE USED TO ANALYZE CAREER ACHIEVEMENT SKILLS TEST RESULTS DURING THE 73-74 SCHOOL YEAR.

The computer is not being used presently to analyze CAST test data.

Objective Six - SECONDARY CAST STUDENTS DURING THE 73-74 SCHOOL YEAR WILL USE A COMPUTER ASSISTED OCCUPATIONAL SEARCH SYSTEM BASED ON DR. JOHN HOLLAND'S "SELF"DIRECTED SEARCH .

Discussion

The Computer Assisted Occupational Search (CACS) system is in the process of being revised. Additions include new activities and competency items. The job bank is being changed, as is the presence of job sexism. The computer will be used to analyze paper and pencil generated input from students. A small number of students will test the new system.

Additional Comments

The next reporting period will focus upon the essential data collections and analyses conforming to the Methods and Design descriptions in the Phase III Plan for each Objective.

A visitation calendar will be established congruent with evaluation design milestones. Cooperation has existed and is expected to continue with local R&D staff to fulfill our mutual project obligations.

EDUCATIONAL SERVICES AND PRODUCTS, INC.
5111 Colony Woods Drive
Kalamazoo, Michigan 49009

Final Evaluation Report
June 1974

HUMAN AND COMPUTER ASSISTED GUIDANCE PROGRAM
The School District of the City of Pontiac, Michigan

Submitted by:

Theodore L. Ploughman, Ph.D.
Evaluation Consultant

Final Evaluation Report June 1974
Phase III

Project: Human and Computer Assisted Guidance (CAST) Program
Agency: The School District of the City of Pontiac, Michigan

EVALUATION REPORT

Evaluation Contract

Evaluation services provided by Theodore L. Ploughman, Ph.D., of Educational Services and Products, Inc., were related to the following areas:

(1) Review student skill objectives by grade level.

(2) Review and critique evaluation design.

(3) Recommend evaluation design changes, if necessary.

(4) Review, critique and assist in developing all evaluation instruments and data analysis procedures.

(5) Monitor evaluation activities.

Final Evaluation Design

A final evaluation design was developed cooperatively by the Project Director - Judy Battenschlag, Pontiac Schools R&D Specialist - Al Pavlish, and External Evaluator - Ted Ploughman. The basic objective for the design was to include evaluation elements which service each of the Objectives specified in the Phase III Plan, dated July, 1973. The evaluation report by Pontiac Schools R&D Staff relates to the following design.

*****

Evaluation Plan - CAST Project

I. Curriculum Module Tests - Junior High

CAST Objective 1

Analysis: 4 - 7th Grade, 2 - 8th Grade, 1 - 9th Grade Class

(1) For each curriculum module test compare average classroom and grade level performance with a Level 3 minimum criterion.

(2) Report percentage of students by classroom and grade level satisfying the Level 3 minimum performance.

II. Student Summary Question - Post Test of Pupil Performance

CAST Objective 1

Analysis: 7 - Junior High CAST Classes, 3 - Control

Compare Experimental students for the 7th, 8th, and 9th grades with a Control classroom at each grade with respect to percentage satisfying Level 3 minimum performance.

III. Observation of CAST Trained Classroom Teachers (Trainees) by CAST Teacher Trainers

CAST Objective 2

Analysis: 7 - Junior High CAST Classroom Teachers

The Teacher Observational Checklist was used by trainers to record level of functioning of CAST trainees. Compare Trainee level of functioning by skill area or average, using Level 3 as minimum acceptable performance.

IV. Student Performance vs. Teacher Behavior

CAST Objectives 1 and 2

Analysis: 7 - Junior High CAST Classrooms

Correlate student performance on summary question with teacher (trainee) observation scores.

V. Growth Pre to Post of CAST Teacher (Trainee) Behavior

CAST Objective 2

Analysis:

(1) Compare scores of teachers on selection instrument with their scores on similar instrument after training.
(2) Correlate selection instrument scores (paper/pencil) with teacher Observational Checklist scores.

VI. Trainer Level of Functioning

CAST Objective 4

Analysis:

Project Director review of Trainee observation data and performance ratings of Trainers to make judgement - "Do better trainers produce better trainees?"

VII. CAST Student Questionnaire

Analysis:

(1) Report item by item response summaries - raw and average scores.
(2) Make cross item comparisons as appropriate for interpretation.

VIII. Parent Questionnaire

Analysis:

Report responses of a random sample of parents to the CAST program.

IX. Administrator Questionnaire

Analysis: Not distributed

X. CAST Curriculum

Analysis: Project Director and Staff

(1) Use feedback from Trainers and Trainees to modify portions of the CAST Curriculum.
(2) Submit a revised "3" week curriculum:

- Early Elementary
- Upper Elementary
- Junior High (Focus of effort)

XI. Computer Use - 9th Grade

CAST Objective 6

Analysis:

Compare performance of students trained to make a job search with the aid of a computer program versus students using a hand version.

Elementary CAST Students

Analysis: Grades 1 and 2

(1) Report performance of students on Curriculum Module questions.
(2) Report discussions by students of their goals and objectives for careers.

*****

INVOICE

EDUCATIONAL SERVICES AND PRODUCTS, INC.
5111 Colony Woods Drive
Kalamazoo, Michigan 49009

Date: June 24, 1074

TO: CAST Project
- Pontiac Public Schools
1830 W. Square Lake Road
Pontiac, Michigan 48053

Attn: Judy Battenschlag
Project Director

Item Description	Cost
Contract Amount - $2400.00	
Amount paid to date - $1260.00	
10% Hold for Final Payment - $240.00	
Balance this Invoice - $900.00	
External Evaluator Services: March 7, 1974 - June 24, 1974	
Five site-visit days at $100 per day -	$500.00
Five planning and development days at $100.00 per day -	500.00
Total	$1000.00
Less 10% hold for Final	100.00
Total due	$900.00

Submitted by:

Theodore L. Ploughman
Evaluation Consultant

CONSULTING OVERVIEW

The primary components of the consulting delivery made by Carkhuff Associates, Inc. to the Career Achievement Skills Training Program (CAST) Pontiac, Michigan are grouped under the categories of People, Programs, and Organizations. The People category includes those components which relate specifically to the upgrading of skills of the people making the skills delivery as well as those supporting that delivery. Program components include those dimensions relating to the career skills program delivered by the teachers and counselors and to the students. Organizational components are those which administratively support and facilitate the delivery of programs to the students.

People

The principle role played by the consultants was to upgrade the level of skills of the local trainers in the CAST Program. It was the responsibility of these trainers to train the helpers, support the program delivery made to the students, conduct diagnoses of the effectiveness of that delivery and to prescribe the remediating procedures. To achieve this, the consultants provided advanced training in the discrimination and communication of career delivery skills, interpersonal skills and physical functionality skills. These included the following:

1. Content Development Skills: The ability to discriminate and operationally define and break down subject matter into functional units.
2. Teaching Methodology Skills: The ability to discriminate and generate a wide variety of didactic, modeling and experiential methods for delivering subject matter.
3. Teaching Strategy Skills: The ability to discriminate and organize subject matter presentations so as to elicit the congnitive functions associated with exploring, understanding and acting on the learning materials.

4. Intellectual Responding Skills: The ability to formulate and discriminate levels of verbal responses which are interchangeable with and appropriately additive to the intellectual content expressed by the student.

5. Classroom Management Skills: The ability to discriminate and organize the physical learning environment so as to optimize the conditions for learning and mastering skills as well as differentially reinforcing the skill learnings to insure their application and retention.

6. Lesson Presentation Skills: The ability to discriminate and develop a lesson so that it contains the elements of readiness, delivery, mastery and retention.

The consultants conducted classroom observations of the trainees alone and in combination with the trainers and master trainer. Systematic classroom observation and diagnostic procedures were developed. Trainers were subsequently trained in formulating descriptive procedures for their own trainees. These consisted of a sequence of steps to be followed in remediating a trainee in each aspect of the observed delivery. For example, if a subject was identified to be functioning at the conceptual level of responding, the first steps would include practice in formulating responses which point to the purposes of principles of the skill being learned.

Programs

Consultant input to the programs being delivered in the CAST Program consisted primarily of the continued expansion of the program components and the range in variety of methodology which could be utilized to deliver the career achievement skills. Additional program training was provided in the affiliated management techniques and procedures which would facilitate the program delivery. Late in the program, some explorations were conducted relative to the identification and development of a wider range of teaching strategies.

Throughout the last year of the program there was a growing concern for the development of transferable strategies for the skills involved in the CAST Program. While this was not considered a main thrust of the program, exploration of transfer potential was deemed important to support the skill learnings. For example, career expanding skills were found to have application in generating word patterns in language arts and in testing permutations in mathematics. Similarly, career decision-making and career planning skills were found to have numerous implications for teaching and learning in other curricula areas.

Organizations

Consultant input was provided to the project administration on an increasing scale during the last year of the program. Initially, it was important to confirm the administrator's own delivery skills within the context of career skills as well as being able to conduct helper training. The administrator was then provided systematic procedures for the implementation of daily operations in the management of long-term planning operations. Concurrent with this input, an internship was conducted with the assistance of the consultant in the areas of program development and modification.

Throughout the project, the consultants assisted and supervised in the delivery of skills to the trainers and the trainees. Additional assistance was provided to the project administrator in formulating research strategies, conducting final trainer and trainee assessments, and in quantifying and qualifying the results of the program.

Recommendations

The following recommendations are made with the assumption of program continuation or application.

1. Trainees should be selected within schools in teams of at least two per grade level in the elementary school and two per academic subject

area in the secondary school. This will provide appropriate support and will facilitate program development and skill transfer.

2. Training should be conducted in clearly defined phases interfaced with supervised classroom skills application. That is, after a basic training in career achievement skills and content responsiveness, the trainees should first be helped to systematically implement these skills in the classroom. Initially, only content and interpersonal skills should be discriminated. Subsequently, methods, strategies, classroom management, reinforcement and lesson presentation skills should be provided and followed-up one at a time to insure their implementation and mastery.
3. Trainers should be individually interned by a master trainer for at least five trainer-trainee observation sessions. This will help insure accurate discriminations of trainees and improve the effectiveness of the teacher prescriptions they make.
4. Trainers, as with the trainees, should be allowed to implement their responsibilities in a systematic step-by-step program. That is, to discriminate and prescribe in one area at a time before proceeding to total functioning.
5. Trainee supervision should occur in at least 25% of the total delivery time.
6. Periodic meetings should be conducted among those trainers and trainees who are curriculum development oriented and among those that are delivery oriented. This will facilitate programatic improvement in the program and its delivery.
7. Trainers should be provided an adjusted class and counseling load to accomodate for their additional supervisory and trainer responsibilities.
8. A full time skills training team, responsible to Pontiac's Administra-

tive Management Team, might be formed composed of one project developed master trainer and three trainers (one at each school level). The training team could coordinate the efforts of each school's training representatives, and work through central and local administrators, to individualize the program to each setting's unique needs.

BEST COPY AVAILABLE

BIBLIOGRAPHY

Battenschlag, Judy, "Phase II Report", Human and Computer Assisted Career Achievement Skills Program - 1973

Life Series

Carkhuff, R. R. The Art of Helping. Amherst, Massachusetts, Human Resources Development Press, 1972

Carkhuff, R. R. The Art of Problem Solving, Amherst, Massachusetts, Human Resources Development Press, 1974

Carkhuff, R. R. and Berenson, D. H., and Pierce, R. N. The Art of Teaching, Amherst, Massachusetts, Human Resources Development Press, 1974

Work Series

Friel, T. W. and Carkhuff, R. R. How 'Who' Develops His Career - Junior High. Amherst, Massachusetts. Human Resources Development Press, 1974

Friel, T. W. and Carkhuff, R. R. How 'Who' Develops His Career - Elementary. Amherst, Massachusetts, Human Resources Development Press, 1974

Friel, T. W. and Carkhuff, R. R. The Art of Developing a Career. Amherst, Massachusetts. Human Resources Development Press, 1974

Holland, John L., "Self-Directed Search", Consulting Psychologists Press, Inc., 577 College Avenue, Palo Alto, California, 1970

Roe, Anne, The Psychology of Occupations, New York - Wiley, 1956

Dictionary of Occupational Titles, Third Edition, 1956, U. S. Department of Labor

PHASE III BUDGET STATEMENT
CAST (H.C.A.G.P.)
(7-1-73 to 6-30-74)

Account Description	Amount Allocated in Original Budget Except at Noted	Amount Expended	Balance
Program Supervisor	$ 19,000.00	$ 19,600.00	(600.00)
Staff	24,000.00*	19,205.49	$ 4,794.51
Substitutes	3,625.00	350.00	3,275.00
Tech. Coordinator	11,500.00	11,270.00	230.00
Co-Op Student	2,500.00	2,569.90	(69.90)
Secretary	12,000.00	9,000.48	2,999.52
Contracted Services	28,532.00	32,426.50	(3,894.50)
External Evaluation	3,000.00	-0-	3,000.00
Materials	5,601.00	2,971.75	2,629.25
Telephone	900.00	852.06	47.94
Office Supplies	1,477.00	863.74	613.26
Travel (local)	975.00	422.28	552.72
Travel (off-site)	1,256.00	1,144.71	111.29
Dissemination	1,000.00	1,082.64	(82.64)
S. S. & Retirement	8,465.00	8,006.64	458.36
Insurance	1,500.00	1,016.11	483.89
Indirect Costs	2,452.00	1,373.00	1,079.00
Equipment	399.00	399.00	-0-
TOTALS	$128,182.00	$112,554.30	$15,627.70

* $3,000 transferred from "Substitutes" line to "Staff" line with MDE concurrence dated 3/27/74.

($xxx.xx) = Negative Balance

PHASE III BUDGET STATEMENT
CAST (H.C.A.G.P.)
(For extended period, 7-1-74 to 10-31-74)

Account Description	Amount Allocated	Amount Expended	Balance
Clerical Aide	$1,000.00	$1,082.20	($ 82.20)
S.S. & Retirement	125.00	207.68	($ 82.68)
Mileage (local)	50.00	9.00	41.00
Contracted Services	5,800.00	5,728.18	71.82
Data Analysis - Eval.	1,900.00	1,123.59 Ext.Eval.500.00	276.41
Telephone	250.00	307.09	($ 57.09)
Supplies	400.00	310.15	89.85
Sub Totals	$9,525.00	$9,267.89	$257.11
Indirect Costs		852.11	
TOTALS	$9,525.00	$10,120.00	($595.00)

($xx.xx) = Negative Balance